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BUSINESS WEEK

Russian Goods
WHAT THEY'RE LIKE
SPECIAL REPORT PAGE 144



Rubber plant sellers: Ending a 12-year government monopoly (page 96)

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JAN. 29, 1955

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Doing a giant job of cutting "downtime"!

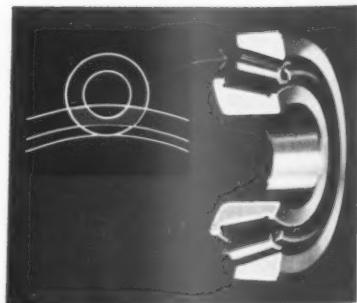
Ever watch a rugged 'dozer go to work? The toughest jobs look like pushovers—and they are! These mighty machines—built to literally "move mountains"—use bearings that are *engineered* for punishment. That's why you'll find dependable Bower Spher-O-Honed Bearings on so many makes—cutting maintenance to the bone. In fact, wherever bearings are used, Bower-developed design features—like those shown at right—are making bearings last longer and perform better. Whether you use tapered, straight or journal roller bearings, specify Bower! You can *depend* on Bower's consistently higher product quality, long engineering experience and modern production facilities.

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"Vision is Indispensable to Progress"

Through glass man's magic view of progress

What glass means to modern living is plainly evident in its glint and thine and sparkle all around us... glass in building construction, in packaging and tableware, in science and communication, in medicine and industry.

The dazzling vista ranges through tens of thousands of forms - from the incredibly delicate filament of nuclear research equipment to the giant 200-inch mirror of the Mount Palomar telescope. Here is a material so versatile that it may be kneaded like dough, blown into bubbles, drawn into threads, woven into fabric, shaped like clay, rolled

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glass, we see continuing research, improved methods of craftsmanship and manufacture achieving amazing flexibility, sensitivity and strength. By steadily widening the frontiers of service for its products, the glass industry presents a crystal-clear example of how our system of free economy leads American enterprise to higher and higher attainment on the road of progress.

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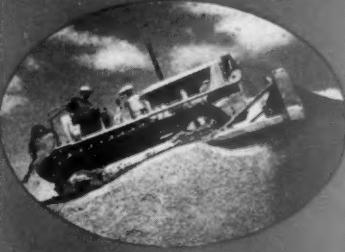
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In Petroleum...



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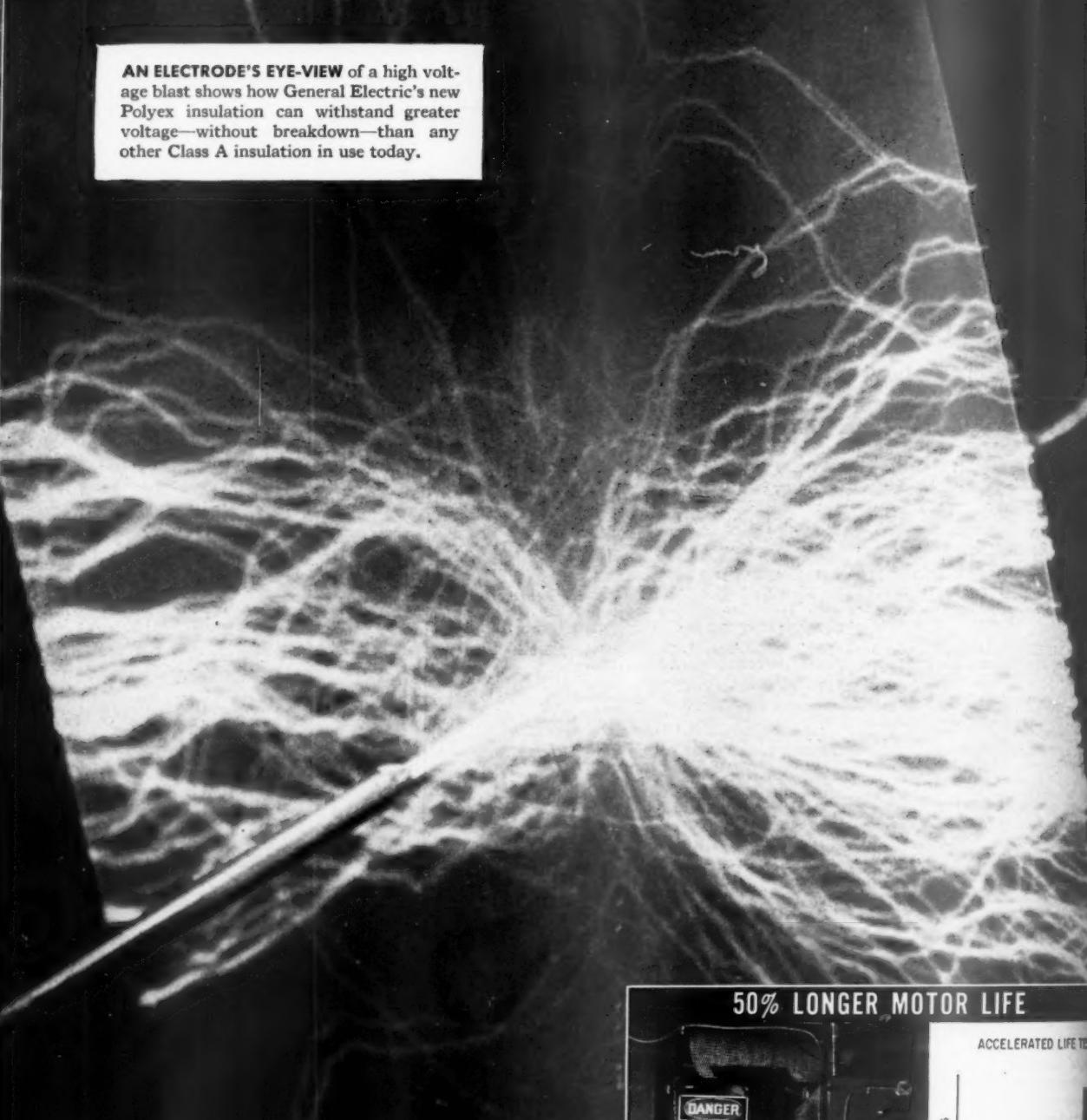


35 successful years of leadership in serving industry with a complete line of high quality petroleum chemicals.

ENJAY COMPANY, INC.

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AN ELECTRODE'S EYE-VIEW of a high voltage blast shows how General Electric's new Polyex insulation can withstand greater voltage—without breakdown—than any other Class A insulation in use today.



50% LONGER MOTOR LIFE



ACCELERATED LIFE TESTS

TIME IN HOURS

Using
Conventional
insulation

Using
New GE Polyex
insulation

New Polyex insulation
takes extreme heat and
mechanical stress

For users of motors from 100 to 3000 hp...

G.E. Develops NEW Insulation That Is 7 Times Tougher—Adds 50 Percent to Motor Life

Revolutionary *POLYEX* insulation gives added margin of protection against motor failures—reduces maintenance costs.

General Electric has developed a complete new insulation for form-wound coils which lasts 50% longer than any other Class A insulation in use today. Its greater ability to withstand physical and thermal stresses, and resist contaminants, provides an added margin of protection that will mean tremendous savings to you because of reduced motor failures and reduced maintenance costs.

POLYEX INSULATION is a balanced system of polyester films and fibres, together with new hydrocarbon resins. For the first time, materials used are inherent insulators in themselves, and the cotton and paper-based tapes and

sheets, used in conventional insulations, have been eliminated.

A FEW OF THE EXHAUSTIVE TESTS on new Polyex insulation are summarized on these pages. Insulation qualities like these offer you tremendous savings in motor maintenance and a greater degree of service continuity than ever before possible.

FOR FURTHER INFORMATION, contact your nearby G-E Sales Representative, or write for Bulletin GED-2460, Section 830-15, General Electric Co., Schenectady 5, New York.

HERE ARE G-E LARGE MOTORS EQUIPPED WITH *POLYEX* INSULATION



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Weather-protected



Totally-enclosed
fan-cooled



Open
Driproof



Grade-mounted
weather-protected

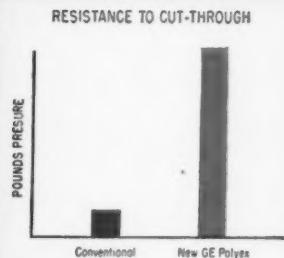


Base-ventilated
weather-protected



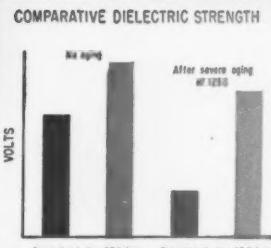
Totally-enclosed
air-water cooled

7 TIMES GREATER PHYSICAL STRENGTH



Cut through test proves G.E.'s new Polyex insulation has extra protection against much greater physical stress.

50% HIGHER DIELECTRIC STRENGTH



Tests prove new Polyex insulation can withstand much higher voltage stresses.

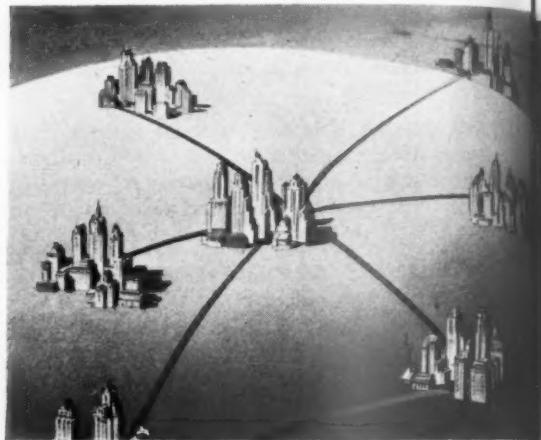
Progress Is Our Most Important Product

GENERAL  **ELECTRIC**

What you should know about **WESTERN UNION** Private Wire Services!



1 Installed at each end of your private telephone line, these printers send and receive messages. Anyone who can operate a typewriter can operate a teleprinter, the heart of nearly every system, which permits instantaneous communication between points where telegraphic connection is desired.



2 Almost 4,000 Custom-Built Systems are now in use, all engineered to the specific communication needs of the specific company. You may require a system covering thousands of miles, connecting branch offices, plants and warehouses all over the country . . .



3 . . . or your needs may be simpler—requiring only a two-station system to connect a plant with your main office or to link two divisions in neighboring cities or states. Either way, chances are you can save time and money with a Western Union Private Wire System.



4 In large systems, message traffic is channeled through this ingenious electronic "control center." Pushbutton operation permits one attendant to handle and re-route a tremendous volume of traffic per day... directly to any and all points in the system.



5 Medium-size systems use a semi-automatic routing center. Incoming messages, on tape, are picked up by the attendant who notes the destination and places the tape in the correct sending slot. A push of a button speeds the message on its way.



6 In addition to handling general messages, all types of business paper work such as orders, tabulations, accounting records, inventory forms, may be sent over your private telegraph system... greatly increasing its value to company operation.

If you are currently spending more than \$75 a month for communications, both oral and written, between any two points,

ask yourself these questions:

- Would instantaneous, continuous telegraphic contact between any two or more points—branch offices, warehouses, plants, etc.—add to the speed, ease and efficiency of present operations?
- Will a permanent, printed record of all incoming and outgoing communications make for a more orderly handling of the company's business?
- Has today's trend toward "decentralization" of business multiplied our own communications problems?
- Should we take advantage of volume purchasing of communications, as we do in most other business items?

If your answer to any of these questions is "yes," it will pay you to investigate the efficiency and economy of a Western Union Private Wire System. For more complete information on what such a system can do for your business, wire collect for our new booklet covering all types and applications of private wire communications.

No cost or obligation.

FREE BOOKLET will give you the necessary facts to evaluate private wires and their possible applications to your business.

**WIRE COLLECT
FOR YOUR
COPY TODAY.**

Just hand
this text to
your secretary.



Class of Service <small>This is a full-service telephone system for the handling of all types of messages. It is designed for maximum efficiency and convenience.</small>	WESTERN UNION
M. D. MARSHALL, President	COLLECT
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City _____ State _____	

everyone can use it...and does!

He has a figuring problem—so, naturally, he's borrowing her Remington Rand All-Electric Adding Machine. Figures are entered on the simplified ten-key keyboard with ease and accuracy. The swift electric action *adds, subtracts and multiplies* . . . and proof is on a two-color tape to provide a permanent record for your files. This new Remington Rand Adding Machine is so easy to use—it will prove to be most popular with everyone in your office. Complete details in free folder AD567. Address requests to Room 1107, 315 Fourth Avenue, New York 10, New York.

Remington Rand



READERS REPORT

On Wisconsin

Dear Sir:

You and your economics staff are to be congratulated on your coverage of the American Economic Assn. meetings at Detroit [BW—Jan. 8 '55, p104], and particularly for your succinct treatment of the interaction of institutional and theoretical economics during the past generation.

In your stress on Veblen and Mitchell, however, you neglected a stream of institutional economics of which AEA President John D. Black himself may be deemed a part; it must indeed have contributed to his preoccupation, which you report, with practical uses of economic theory. For it is probable that no American university was more thoroughly permeated by institutionalism than was the University of Wisconsin during the time of Richard T. Ely and John R. Commons. The "Wisconsin Idea," that in a state university service to the people should go hand in hand with advancement of learning, flowered during this period. And it was at Wisconsin during this period that Prof. Black, a native of the State, studied for the Ph.D. as well as his earlier degrees.

We who share this background try to keep its contributions in perspective, but are not too happy to see them overlooked. Let me note, too, in connection with the development of "the whole concept of the Gross National Product and its components," that it was to the widely respected senator from Wisconsin, the late Robert M. La Follette, Jr., that those engaged in this pioneering work turned when the time for government participation arrived. It was La Follette's Senate resolution that enabled the Dept. of Commerce to launch its immensely fruitful work in this field. Minor, perhaps, but typical.

RODERICK H. RILEY
CONSULTING ECONOMIST
MILWAUKEE, WIS.

The Maid's Dilemma

Dear Sir:

Re your Dec. 11 '54 issue (The Minute Maid Dilemma, p42), the present Minute Maid dilemma would seem to be how to keep up with the reputation you gave it as a financial wizard. I don't believe many companies can show such

REPORT

Can you guess which metalworking plant caught fire in a flash?



They both did! The plant going up in smoke had an early morning flash fire, which quickly enveloped the entire building in flames. 35 persons were killed; property damage estimated at \$342,000.

But a flash fire also occurred early in the morning at the Spencer Thermostat Division of the Metals & Controls Corporation in Attleboro, Mass. Only this fire was promptly extinguished by a Grinnell Automatic Sprinkler System. Production wasn't even interrupted.

Grinnell Sprinklers stop fire at its source, wherever and whenever it strikes, night or day, with automatic certainty.

Seventy-seven years experience proves this fact.

When you consider the far-reaching effects of a serious fire — records destroyed, employees thrown out of jobs, customers driven to other sources of supply — the cost of a Grinnell Sprinkler System is a small price to pay for around-the-clock fire protection.

As a matter of fact, a Grinnell Sprinkler System often pays for itself in a few years through reductions in insurance premiums. So, if you have fire insurance, you're probably paying for Grinnell Protection anyway . . . why not have it? For complete details mail the coupon below.



GRINNELL
PROTECTION AGAINST EVERY FIRE HAZARD

Manufacturing, Engineering and Installation of
Automatic Sprinklers Since 1878



GRINNELL COMPANY, INC.
265 West Exchange Street, Providence, Rhode Island

Please send me literature on Grinnell Automatic Sprinklers.

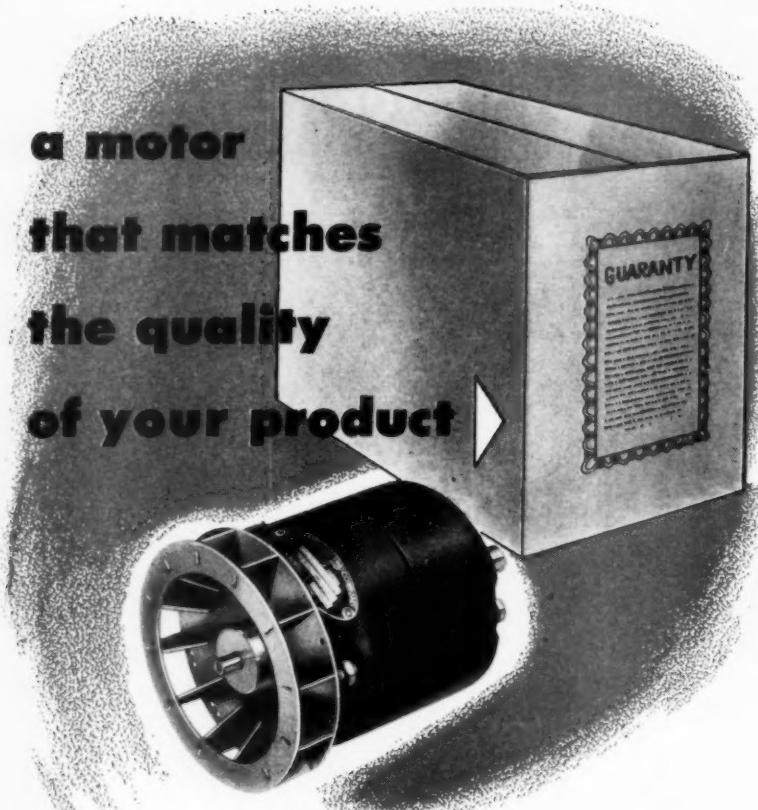
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COMPANY.....

ADDRESS.....

CITY..... ZONE..... STATE.....

a motor
that matches
the quality
of your product



You are assured motor performance on a level with the excellence of your product, when you use a Lamb Electric Motor.

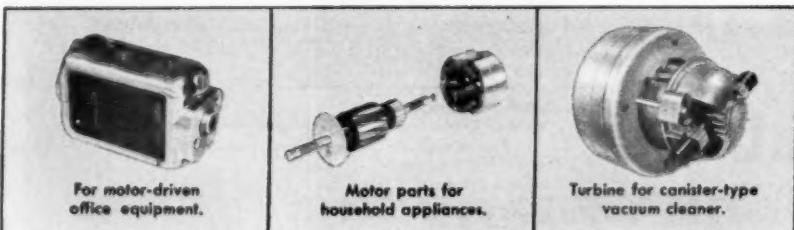
Outstanding motor quality and uniformity are the result of our high degree of specialization in both equipment and methods, combined with rigid process control.

Your staff and ours working together can give *your* product the dependability and long life that result from this standard of motor quality.

THE LAMB ELECTRIC COMPANY • KENT, OHIO

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Sangamo Company Ltd.—Leaside, Ontario

Lamb Electric
SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS



profits (\$700-million) on sales of less than \$40-million; and to think that a couple of years ago it made the billion-dollar-profit mark. Wow!

JULIO E. ESTRADA

PATRIA

COMPANIA ANONIMA DE SEGUROS
GUAYAQUIL, ECUADOR

• Another case of inflation.

What the Truckers Pay

Dear Sir:

Reader Janis M. Armatrout states [Truckers Pay 40%—BW—Dec. 18'54, p14] that truckers pay "as high as 40% of the total of all highway (costs)" and that they are "paying more than their fair share." This is simply not the case.

At the moment there is a hot battle proceeding between the Los Angeles City Council and the organized truckers of this area regarding unbearable noises and excessive use by the truckers of the recently opened \$100-million-Hollywood Freeway. The truckers at first tried to justify their actions by just the arguments advanced by Reader Armatrout. However, it was shown and admitted by the Motor Truck Assn. of California in a letter to the undersigned, that the truckers actually pay no part of either highway construction or maintenance costs. The taxes paid by the truckers on their fuel purchases, as well as the cost of truck licenses, etc., are all a part of their cost of doing business, which is passed on in full to their customers, and eventually paid by the man who pays all the taxes—John Q. Public. The truckers as a body actually pay nothing for the use of the highways of the country.

ROBERT L. STEWART

INDUSTRIAL ECONOMIST
HUNTINGTON PARK, CALIF.

The Craftsman Shortage

Dear Sir:

In BUSINESS WEEK of Oct. 30'54, p90, some statements are made in the article, Building Tomorrow's Scientist, which I feel are worthy of comment.

In the opening three paragraphs, the need for repairs to high tension lines, oil burner systems, etc., is pointed out. Also . . . that it doesn't require an engineer or a scientist to patch up broken electric lines, and identifies the needed individual to be a skilled technician. It is [also] stated that not enough youngsters are training for careers

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This view in the Board of Directors Room of the recently completed general offices of the Brown Shoe Company, St. Louis, Mo., shows how Permacoustic provides a ceiling that is beautiful and acoustically functional.



A beautiful Solution TO NOISE-CONTROL PROBLEMS

Johns-Manville

Permacoustic

decorative acoustical tile

J-M Permacoustic® is an acoustical ceiling tile that combines maximum acoustical efficiency with unusual architectural beauty and complete fire safety.

Permacoustic is available with either a textured or fissured surface. These random-textured finishes increase its high sound-absorbing qualities, and provide design and decorative interest.

Made of baked rock wool fibres, Permacoustic is fireproof—meets all building code fire-safety requirements. It is easy to install on existing ceilings or slabs, or by suspension using a spline system of erection.

For a complete survey by a J-M acoustical expert, or for a free booklet entitled "Sound Control," write Johns-Manville, Box 158, Dept. BW, New York 16, New York. In Canada, write 565 Lakeshore Rd. East, Port Credit, Ontario.



INFORMATIONAL DATA ON PERMACOUSTIC

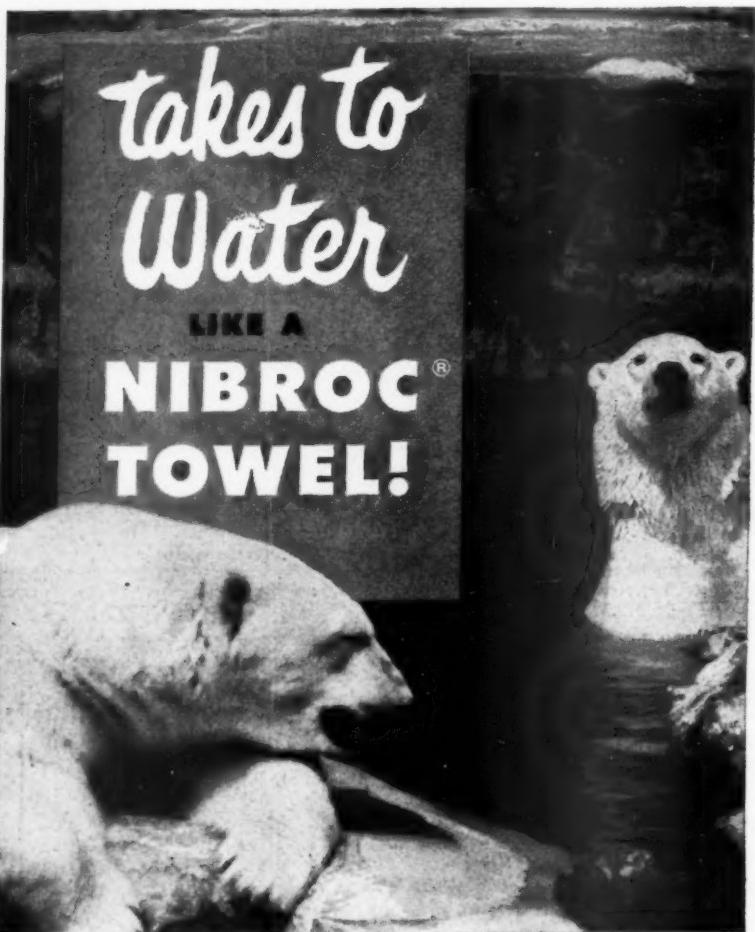
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ACOUSTICAL EFFICIENCY		Test No. A51-98	
cycles per second	cemented to plaster board (mounting No. 1)	mechanically mounted on special metal supports (mounting No. 7)	
125	.04	.56	
250	.21	.53	
500	.75	.60	
1000	.88	.73	
2000	.85	.88	
4000	.78	.88	
noise reduction coefficient	.65	.70	
weight per sq. ft.	1.3	1.3	

*Also available in 7/8" thickness



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The paper towel used most by industry for real washroom economy



Nibroc towels soak up water faster . . . that's the big way they cut your washroom costs. And there are other ways . . .

1. They dry drier faster . . . your employees save time!
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GET NEW NIBROC SOFWITE AND SOFTAN TOILET TISSUE

Costs no more than ordinary tissue. Save by ordering towels and tissue together.

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BROWN COMPANY



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GENERAL SALES OFFICE: 150 CAUSEWAY STREET, BOSTON 14, MASS.

in science and technology. My comments are as follows:

(1) To repair a broken electrical line requires not a skilled technician but a skilled craftsman.

(2) I would agree that there are not enough good technicians to go around.

(3) . . . The training of youngsters for careers in science and technology will not of itself meet the needs of industry for skilled craftsmen and technicians.

To define my terms so that we may have better mutual understanding:

(1) Skilled craftsman — high school graduation after a major in industrial education followed by an approved apprenticeship program and then journeyman status.

(2) Technician — high school graduation with or without a major in industrial education, plus 2 years of junior college training on a technical level—also classified as sub-engineering.

(3) Engineer — four years or more of professional training in a recognized engineering college.

There are definite shortages in all of these career levels. But magazines like yours have given publicity primarily to the engineering level. An article such as Building Tomorrow's Scientist is typical since it starts out in the premise that we need skilled craftsmen (confusing the issues by labeling it skilled technician) and draw the conclusion that the solution to the problem is to train more scientists and engineers. The industrialist and the educator are aware of the need for publicity concerning the shortage on all three levels. Those of us who have responsibilities in the area of training for industry both on the skilled craftsman level and the technician level need the help of outstanding national publications such as yours to point out to the general public the opportunities. . . .

GORDON FUNK

SUPERVISOR, INDUSTRIAL EDUCATION
LOS ANGELES CITY BOARD OF EDUCATION
LOS ANGELES, CALIF.

Job Solution

Dear Sir:

I have just read with interest your article on "Living with Unemployment in a Coal Town" [BW—Jan. 8 '55, p44].

Aside from the waste of the economic resources of the country in having idle men, because of their education to believe that it is the

man's place to support his family, causing social tension and demoralized men result from unemployment. Had the education stressed skilled techniques that either parent is equally responsible for the children, and that is that then they are partners in marriage, each technician one doing what he can to help the family without specifying what is man's work and what is woman's work, then the social impact of reversed roles would be more normal and not so demoralizing.

However, the purpose of this letter is to offer a positive solution to the anthracite unemployment problem, as well as several other problems at the same time. I am organizing "the Franklin Transportation Corporation" for the purpose of building a new rapid transit for the expanding suburbs of Manhattan. New York's radius doubles with each generation. Today it is 50 miles, in twenty years it will be 100 miles. This new system is to go to the Berkshires, out Long Island and down New Jersey, but for the benefit of the unemployed miners in Scranton region, we could build the first line from the Western portals of the new cross Manhattan set of tunnels to Scranton. This would be a high speed rapid transit that could average 100 miles each hour, with a new efficiency that could offer low fares at a profit. We could put many miners to work building the new tunnels across Manhattan, because it would not be a job specifically for sand-hogs, since we intend to build the tunnels at a very deep level, deep in bed rock below the bomb effect of an exploding hydrogen bomb. . . .

FRANKLIN P. GROSS

TRANSPORTATION CONSULTANT
LONG ISLAND CITY, NEW YORK

Aid to Colleges

Dear Sir:

I have read two articles in the Jan. 8 issue of BUSINESS WEEK, entitled *Woes That Beset the Colleges* (p78) and *Broader Aid for Education* (p128).

These articles are well written and well documented. They will do a lot of good. . . . It seems to me that BUSINESS WEEK in many ways has told the story better than we have told it ourselves.

It is encouraging to see the continuing evidence of the interest of the McGraw-Hill group in these matters.

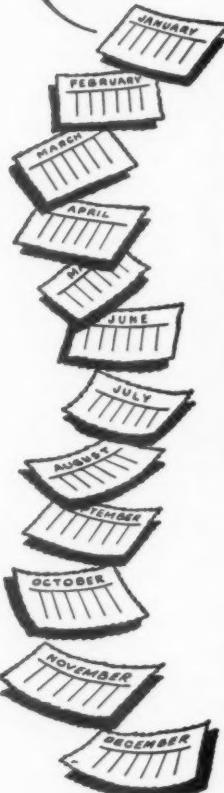
WILSON COMPTON

PRESIDENT
COUNCIL FOR FINANCIAL AID TO
EDUCATION, INC.
NEW YORK, N. Y.

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Year 'Round Production



Georgia's mild year 'round weather eliminates costly shutdowns on the production line. Every day is production day in Georgia—that's why industry is on the move to Georgia—with her amazing array of natural and physical resources. Over 7,100 manufacturers are proving that it's good business to produce in Georgia.

Year 'Round Production MEANS Year 'Round Profits

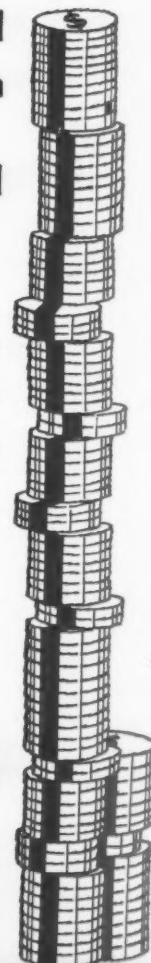
- Transportation unlimited—the strategic hub of the entire Southeast.
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- Nearby Consumer Markets—help new businesses prosper in Georgia.

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If your business is highly competitive and you're looking for an edge—it will pay you to get the latest facts and figures on doing business in Georgia. Write today to Scott Candler, 100 State Capitol, Dept. 4, Atlanta, Georgia



GEORGIA DEPARTMENT
OF COMMERCE



Honeywell Electronics

will save thousands of dollars in the world's most modern building

**Honeywell Electronic air conditioning control means
impressive economy of performance, maintenance**

Office building comfort and efficiency will come of age—*electronic age*—when the huge new Mid-America Home Office Building of the Prudential Insurance Company of America is completed in Chicago.

For super-sensitive electronic air conditioning controls will mastermind the ideal indoor weather to be provided throughout the building by Honeywell Customized Temperature Control.

These electronic controls, developed by Honeywell after years of research and testing, are far more sensitive than ordinary controls. Yet they're far simpler in construction, have no moving parts to get out of order.

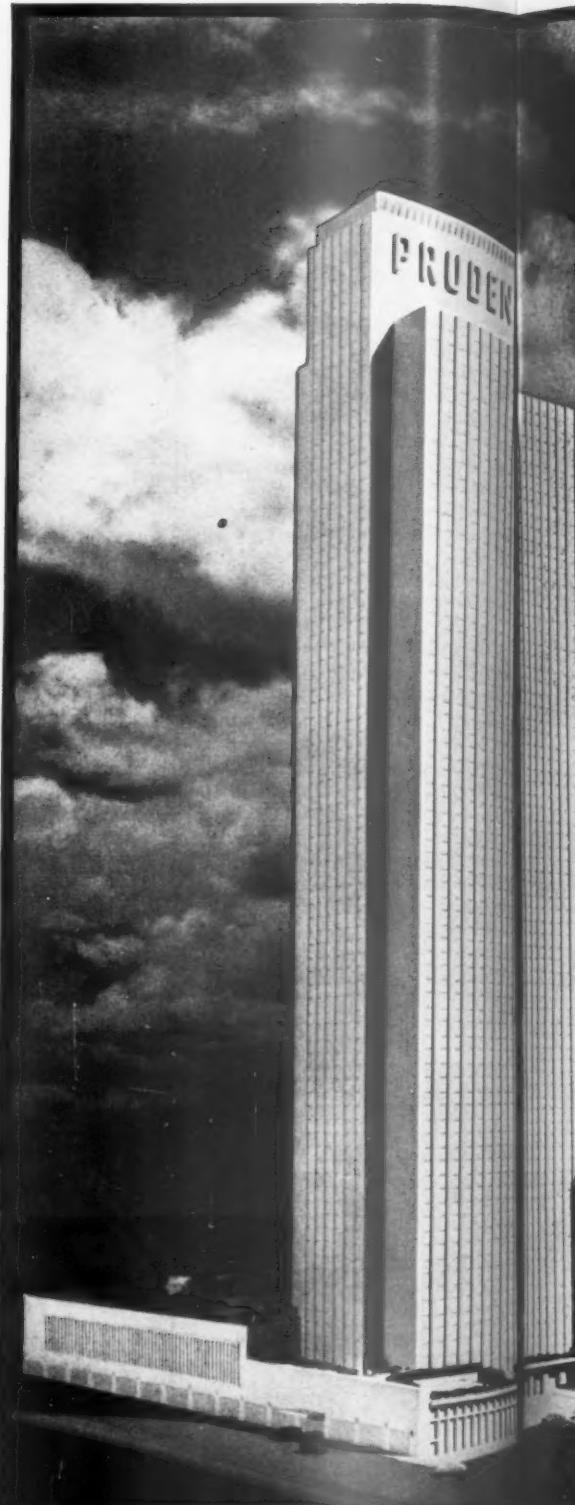
Over a period of just a few years electronic master controls in the Prudential building will pay for themselves—at an estimated yearly rate of saving of 27% of the original cost. How this saving will be made is explained at right.

As in every building with Honeywell Customized Temperature Control, all controls in the Prudential building will be part of an integrated system.

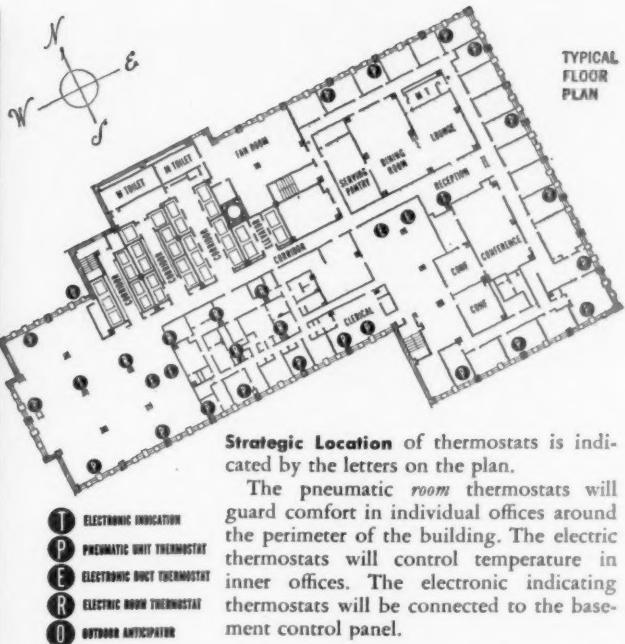
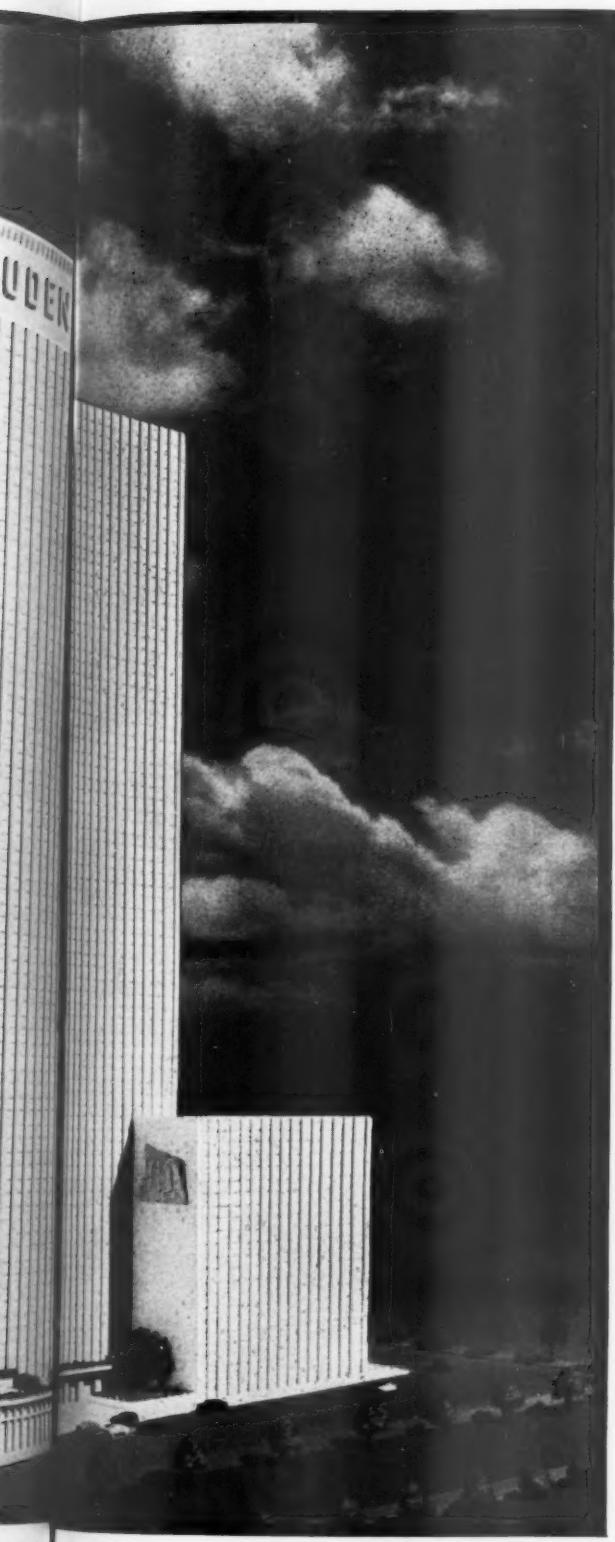
All thermostats will play an important role in combatting *occupancy and use* comfort problems.

Another function these strategically placed thermostats will easily handle is *exposure compensation*. If the wind from Lake Michigan to the east is strong and cold, thermostats on that side will call for more heat. And when the summer sun beats down on the south face of the building, thermostats *there* will call for more cooling.

Of greatest significance, however, to the future of comfort controls in the buildings of America is the *electronic phase* of the Prudential installation. It will set the pattern for years to come. No building will be truly modern without it.



Model of the Mid-America Home Office of the Prudential Insurance Company of America now under construction in Chicago. Architects and engineers: Nassi & Markey, Chicago. General Contractor: George A. Fuller Co.; Air Conditioning and Refrigeration Contractor: William A. Pope Co.; Heating Contractor: H. P. Roger & Co.; Ventilating Contractors: R. B. Hayward Co. and Jamar-Olmen Co.; Electrical Contractors: Fitchbach, Moore and Morrissey Inc.; Emerson-Comstech Co., Inc.; J. Livingston & Co.; Air Conditioning by Carrier Corporation. Rental Agent: L. J. Sheridan & Co., Chicago.



Strategic Location of thermostats is indicated by the letters on the plan.

The pneumatic room thermostats will guard comfort in individual offices around the perimeter of the building. The electric thermostats will control temperature in inner offices. The electronic indicating thermostats will be connected to the basement control panel.

How Electronic Controls will save thousands of dollars

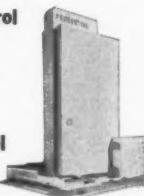
Heart of the electronic master control system will be a basement control panel. From this one location a trained operator can read and adjust the setting of 203 master electronic thermostats—all *remotely*. These thermostats will be located on the water, primary air, cooling and heating systems. It is estimated the integration of the control system with the electronic controls and panel will eliminate 2 degrees of overheating, 2 degrees of overcooling and make checking, calibrating and maintenance easier, simpler, and considerably less expensive. This will make possible an annual saving of thousands of dollars in maintenance and operation.

For full facts on Honeywell Electronic Temperature Control, call your architect, heating engineer or local Honeywell office.

Without Honeywell Electronic Control

203 Check points

203 points would have to be checked at the thermostat.



With Honeywell Electronic Control

1 Check point

An operator at a panel in the basement will be able to check and adjust all 203 remotely.

**For the finest, most modern temperature control
in new or existing buildings—of any
size—use Honeywell Electronic Temperature Control**

MINNEAPOLIS
Honeywell

Electronic Controls



112 offices across the nation

...ENCOURAGE LEADERSHIP



LEARN BY DOING—Each year thousands of boys and girls learn how to become better farmers and better citizens through 4-H Awards Programs, such as the Entomology Program sponsored by Hercules. Top awards are college scholarships. Hercules' interest in improved farming methods stems from its development of agricultural chemicals, notably toxaphene for insecticides.

HOW HERCULES HELPS...

Most businesses are helped today by Hercules' business . . . the production of synthetic resins, cellulose products, chemical cotton, terpene chemicals, rosin and rosin derivatives, chlorinated products, and many other chemical processing materials—as well as explosives. Through close cooperative research with its customers, Hercules has helped improve the processing or performance of many industrial and consumer products. We welcome the opportunity to work with you.

STANDARD MODELS and plastic-bodied sports cars alike rely on nitrocellulose lacquers for durability and beauty. In the manufacture of these polyester laminates, such as this car door, Hercules hydroperoxides act as the catalyst in their polymerization.



...DRESS UP AUTOS



WHITER, BRIGHTER CLOTHES—Hercules® CMC is a key ingredient in detergents . . . suspends soil, prevents its redeposition on clothes. This excellent property of suspension enables Hercules CMC to serve in a variety of consumer and industrial products.

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BUSINESS OUTLOOK

BUSINESS WEEK
JAN. 29, 1955



Business has recovered just enough so that relatively small pressures can, in many instances, crowd capacity and cause pretty major distortions.

You have seen that for some time in steel and copper tightness.

You saw it even more forcibly in several other markets for industrial raw materials this week as war fears stirred speculation.

Quick Congressional action on Pres. Eisenhower's request for standby powers to defend Formosa spurred buying of materials we import.

Rubber prices bounced in a market that was already fidgety. And tin, depressed for some time, was very strong in London at midweek.

Competition with natural rubber will intensify after the government synthetic plants pass to private hands (page 96).

Meanwhile, the rampant rate of auto output presses on supplies.

The way cars are being turned out now, original-equipment tire needs for the first half of 1955 could come close to 20-million.

—•—

Auto output this month will top by far all January records (despite a slowdown just announced by American Motors).

The figure easily will exceed 600,000. January's total last year was 456,000; in record-breaking 1950, it was 488,000.

For the record, the all-time top came in June, 1950, at 721,000.

Highest weekly auto output since the new models were introduced was last week's, above 160,000. Nothing like this was ever before seen in January; you have to go back to the 1950 summer peak to beat it.

This extraordinary winter activity in autos traces to:

- (1) The fine response to the new models (BW—Jan. 15'55, p25).
- (2) Rebuilding dealer inventories, intentionally depleted last fall to clear the decks for the new models.
- (3) Laying by a few cars in case there are strikes next summer when the auto industry's five-year union contracts expire.

—•—

Power figures, at a new peak last week, afford food for thought on the future rate of electric utility expansion.

The 1955 addition to capacity will be some 13-million kw. (the largest ever, despite a small decline in over-all utility expenditures). But scheduled additions in 1956 and 1957 drop sharply, according to figures compiled by Electrical World for the magazine's annual review.

Some slowing down may have been indicated by 1954's reduced rate of growth. But power demand now seems to be reversing that.

Capacity of the electric power industry this year will reach 115-million kw.—compared with 52.3-million in 1947.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
JAN. 29, 1955

This huge increase was enough, understandably, to encourage electrical men to think they were beginning to catch up with their customers.

But last week's output missed 10-billion kwh. by only a hair.

Moreover, the rate of gain over a year ago once again has widened to 10% and better. (Last week's figure ran ahead by 11.2%).

Record use of electricity (at a time of year when demand should be declining a little) reflects (1) unusual heating demand, particularly in the Southeast, and (2) reviving industrial activity.

The highly industrialized Great Lakes region (where demand was disappointing during last year's slump) is showing 8% and 9% gains.

—•—
Here's an example of how one industry directly boosts another:

Booming home building brightens prospects for appliance output. The upturn in appliances late last year—and prospects for continuing good volume—in its turn raises residential demand for electricity.

Dollar volume in all appliances this year is estimated by McGraw-Hill's Electrical Merchandising at about its 1953 level—\$7-billion.

This despite the fact that some types of electrical gadgets have pretty well reached the point where they have to count mainly on replacement plus market growth for their new sales.

Electric refrigerators, for example, now serve more than 90% of our wired homes. Radios score 98%, standard irons 90%.

Among the postwar period's more spectacular appliance gains must be numbered (1) TV that now is installed in about 75% of homes wired for electricity, and (2) clothes washers that cover 80% of the market.

Unlike washers, clothes dryers have barely dented the market (7%) and ironers have been bought by only 10% of those who might use them.

Room air conditioners may never become "necessities" to the same extent as some of the older appliances. Yet they have barely dented their market potential with 4½% of the country's wired homes.

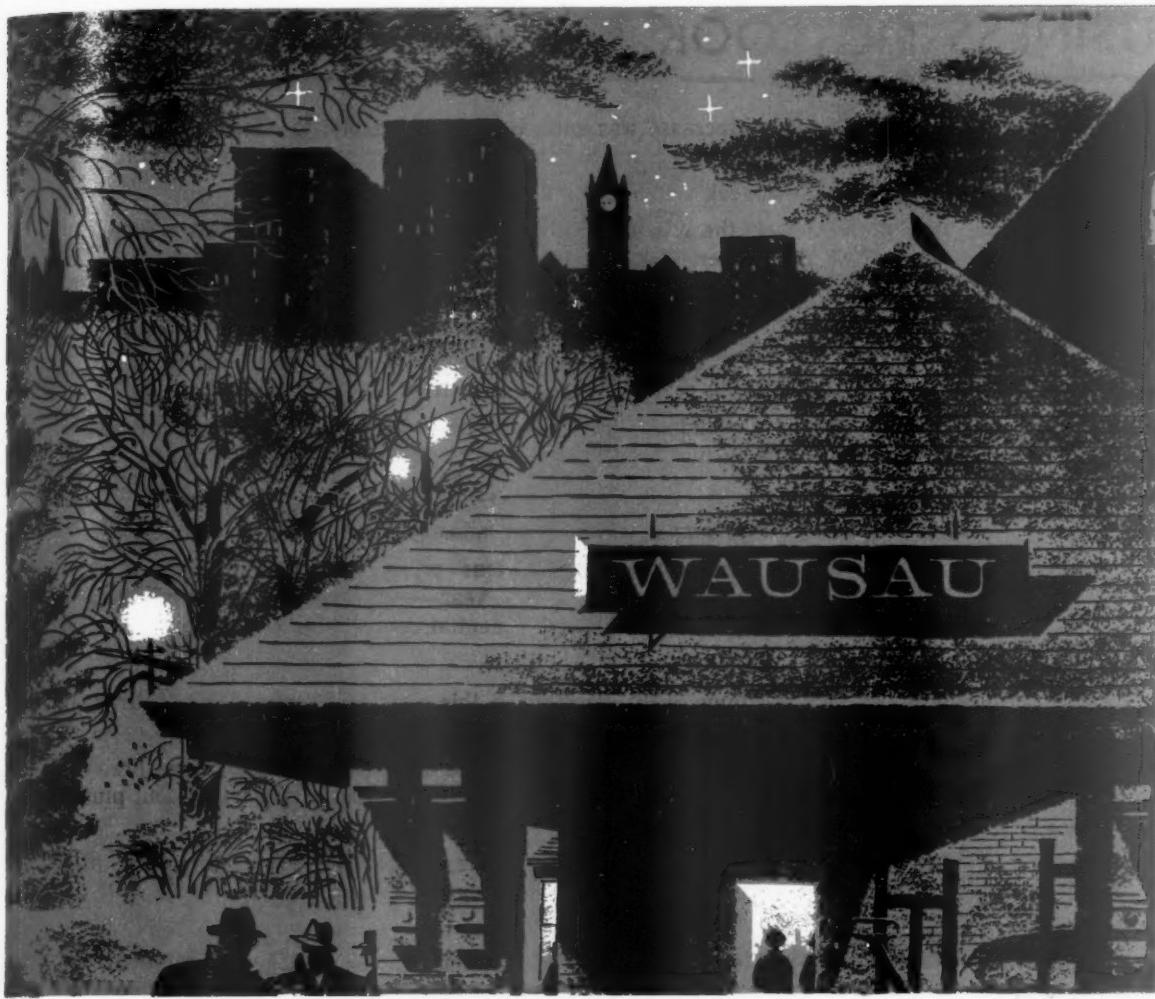
Freezers, another relative newcomer, are in 15% of wired homes. They took a setback, however, due to overselling of "food plans."

—•—
Steel has been having quite a week.

It started quietly enough when, as no great surprise, this week's rate of operations was announced by the American Iron & Steel Institute as 84% of capacity (another new high for the recovery).

The fireworks came when United States Steel announced a dividend increase and a stock split. That sent all the steel shares kiting on Wednesday—and, in general, picked up a faltering stock market (page 132).

—•—
Copper producers who had been trying to hold the price at 30¢ a lb. admitted, by midweek, that the fight was hopeless. London prices were so much higher they were almost out of sight—acting as a magnet for foreign copper that might otherwise have come to the U.S.



How come one of the world's most important insurance companies is located in Wausau, Wisconsin?

The fishing's good near Wausau. It's only a stone's throw to where the deer run. Once in a while, they say, a lynx comes down from the north.

And it's the home of one of the world's most important insurance companies.

How come?

This was lumber country once. And lumbering was a hazardous business. 43 years ago a group of lumbermen joined together to pay the claims of injured sawmill workers under Wisconsin's new workmen's compensation law. The group came to be called The Employers Mutuals of Wausau.

Wausau is no longer lumber country. But Employers Mutuals has stayed. So have the men who guided the company from the very beginning.

How come?

Because they knew that something good had grown up there. A certain way of doing business that was good. An almost personal character. A fairness that bent over backward rather than forward. Policyholders and their employees kept saying that Employers Mutuals were "good people to do business with."

There was a "Wausau personality" about us that people seemed to like and we didn't

want to lose. We're a large company today. We write all types of casualty and fire insurance, and are one of the very largest in workmen's compensation. We have two reputations, born and raised in Wausau, that we aim to hold. One is unexcelled service on claims. The other is an accident prevention program that means lower costs to policyholders.

We're still "Wausau." But today there are offices of Employers Mutuals of Wausau in 89 cities. "A little bit of Wausau on the sidewalks of New York." And we're still good people to do business with.

Employers Mutuals of Wausau



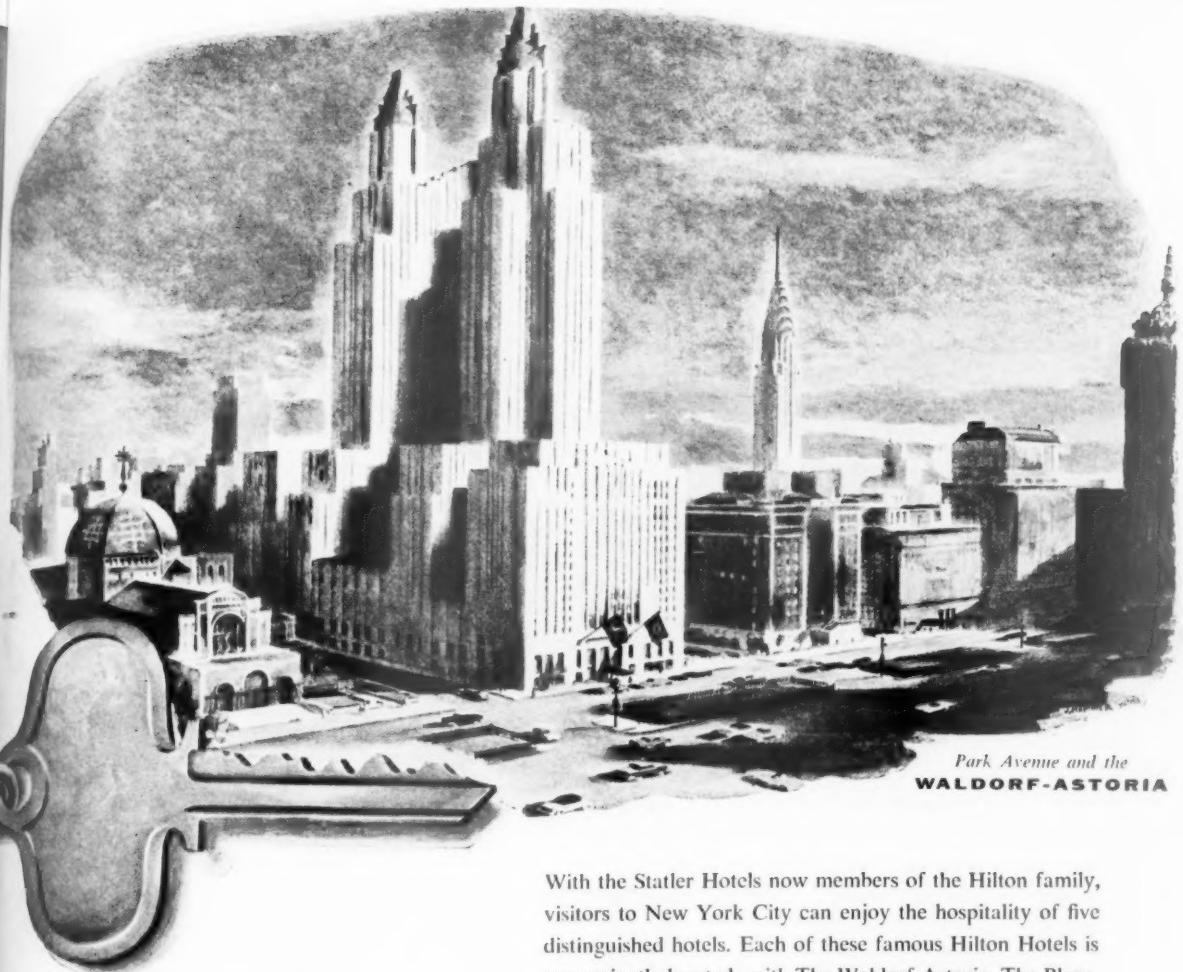
"Good people to do
business with"



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In New York, Washington, Boston, Hartford, Buffalo, Cleveland, Detroit, St. Louis and Los Angeles

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In Istanbul, Turkey: (Opening Spring, 1955)
In Beverly Hills, California: (Opening Summer, 1955)
In Dallas, Texas: (Opening Fall 1955)

RESERVATIONS for room accommodations at all Hilton Hotels and Statler Hotels can now be made by contacting an Assistant Manager of any hotel in the group.

With the Statler Hotels now members of the Hilton family, visitors to New York City can enjoy the hospitality of five distinguished hotels. Each of these famous Hilton Hotels is conveniently located—with The Waldorf-Astoria, The Plaza, and The Roosevelt on the East Side, close to Grand Central Terminal . . . and The New Yorker and The Statler on the West Side, adjacent to Pennsylvania Railroad Station.

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Hilton  *Hotels*

Executive Offices, Chicago 5, Ill.

AROUND THE WORLD
A HILTON GUEST ENJOYS THE BEST

Conrad N. Hilton, President



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GF increases your employees' PF*

*PRODUCTIVITY FACTOR

*Because surroundings affect morale, people work better
in a modern office equipped with GF METAL FURNITURE*

TODAY'S progressive companies know the value of creating and maintaining high employee morale. They know it is stimulated by such modern developments as better lighting, soundproofing and modern, efficient "office tools".

GF's Mode-Maker metal desks, Goodform aluminum chairs and Super-Filer—the mechanized filing equipment—are the finest office tools in American business today. This metal business furniture is efficiently modern in every way and good look-

ing, yet surprisingly economical.

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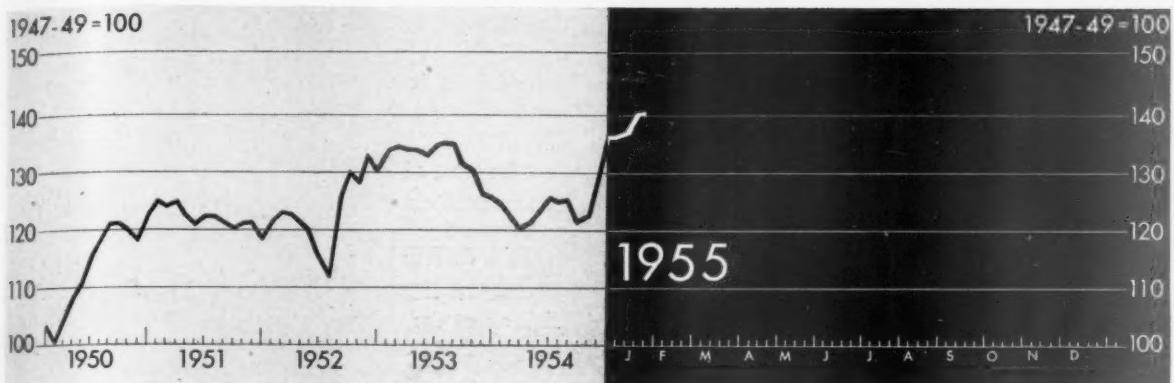
Because GF metal furniture is solidly built for years and years of hard

wear without losing its beauty or efficiency, your initial investment in it for your entire office staff will repay itself many times over. Call your nearest GF distributor or write The General Fireproofing Company, Dept. B-40, Youngstown 1, Ohio.

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ALUMINUM CHAIRS • SUPER-FILER
MECHANIZED FILING EQUIPMENT •
GF ADJUSTABLE STEEL SHELVING

Good metal business furniture is a good investment

FIGURES OF THE WEEK



Business Week Index (above) \$ Latest Week Preceding Week Month Ago Year Ago 1946 Average

PRODUCTION

Steel ingot production (thousands of tons)	2,027	+2,008	1,850	1,802	1,281
Production of automobiles and trucks	193,207	+184,362	149,418	146,741	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands)	\$53,971	\$56,953	\$44,614	\$31,930	\$17,083
Electric power output (millions of kilowatt-hours)	9,981	9,928	9,431	8,976	4,238
Crude oil and condensate production (daily av., thousands of bbls.)	6,695	6,689	6,401	6,292	4,751
Bituminous coal production (daily average, thousands of tons)	1,447	1,418	1,470	1,363	1,745
Paperboard production (tons)	252,346	255,794	239,060	243,978	167,269

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars)	65	61	65	63	82
Carloadings: raw materials (daily av., thousands of cars)	43	39	42	40	53
Department store sales (change from same week of preceding year)	+16%	+13%	+3%	-8%	+30%
Business failures (Dun and Bradstreet, number)	265	200	213	208	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)	415.3	413.6	411.4	418.3	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100)	91.5	90.9	89.5	81.5	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100)	90.5	90.7	90.7	96.4	††75.4
Print cloth (spot and nearby, yd.)	19.2¢	19.2¢	18.8¢	19.8¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100)	144.7	+144.6	144.6	141.3	††76.4
Scrap steel composite (Iron Age, ton)	\$35.50	\$34.50	\$32.83	\$27.67	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.)	30,000¢	30,000¢	30,000¢	29,955¢	14,045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$2.42	\$2.44	\$2.45	\$2.38	\$1.97
Cotton, daily price (middling, ten designated markets, lb.)	34.27¢	34.10¢	34.26¢	33.42¢	30.56¢
Wool tops (Boston, lb.)	\$2.02	\$2.02	\$2.08	\$2.12	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's)	282.0	278.0	281.1	206.0	135.7
Medium grade corporate bond yield (Baa issues, Moody's)	3.46%	3.46%	3.45%	3.69%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate)	11-1½%	11-1½%	11-1½%	2½%	3-1½%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks	58,368	57,981	58,025	56,090	††45,820
Total loans and investments, reporting member banks	85,449	85,481	86,564	79,478	††71,916
Commercial and agricultural loans, reporting member banks	22,163	22,237	22,423	22,686	††9,299
U. S. gov't guaranteed obligations held, reporting member banks	36,602	36,513	37,205	32,987	††49,879
Total federal reserve credit outstanding	25,082	25,739	26,481	26,412	23,883

MONTHLY FIGURES OF THE WEEK

		Latest Month	Preceding Month	Year Ago	1946 Average
Cost of Living (U. S. BLS, 1947-49 = 100)	December	114.3	114.6	114.9	83.4 *
New orders for machinery, except electrical (McGraw-Hill, 1950 = 100)	December	90	114	84	N.A.
Exports (in millions)	November	\$1,242	\$1,264	\$1,247	\$812
Imports (in millions)	November	\$839	\$763	\$849	\$412

* Preliminary, week ended Jan. 22, 1955.

** Estimate.
N.A. Not available.

† Revised.

‡ Date for "Latest Week" on each series on request.

in BUSINESS this WEEK . . .

GENERAL BUSINESS:

SHOWDOWN WITH RED CHINA. It may mean eventual stability in the Far East, but it could bring cold, even warm, war..... p. 27
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turers hope to up production and still hold costs down to low 1954 levels..... p. 32

FLYING BY TV WILL BE SIMPLER. Two new tubes will be part of the neater instrument panel.. p. 34
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BRITAIN IS SWINGING TOWARD A ONE-CLASS MARKET. It's building a mass market for consumer goods on the rise of an "upper working class"

HOW TO LIVE NEXT TO RUSSIA. Coexistence is a necessity and a way of life for Finland..... p. 114

DOW TRIES DUTCH TREAT. The chemical company will set up a subsidiary in Rotterdam..... p. 115

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COMMODITIES:

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I. HOW THE U.S. SELLS AN INDUSTRY. Two bankers and a cotton broker end the government's 12-year monopoly (cover)

II. AN INDUSTRY GETS SET FOR A NEW, COMPETITIVE MARKET. Now that it's in private hands, the fight with natural for a larger share of the market will get hotter..... p. 96

LABOR:

NOW LEWIS LEANS ON THE LAW. Mine Workers chief, foe of federal legislation, finds that it may be a crutch

DEMOCRATS MAKE LABOR HAY. This week they signaled the start of a cold war over Eisenhower's labor policies

PAY PROTESTS. Contractors in TVA area claim its wage-setting policy is "unsettling" prevailing rates. p. 124

WORRY BRINGS ... strike threat to Studebaker, as union fears a change in "friendly" management.... p. 126

COMPANIES:

THEIR STOCK-IN-TRADE: EXPERIENCE. Partners of Coverdale & Colpitts apply engineering training to business problems

FINANCE:

THEY THRIVE ON ADVERSITY. In a troubled market, investors look to electric utilities

DEBT BOOMS ALONG WITH HOUSING. Estimated yearend mortgage debt was 14% over 1953..... p. 60

FIRST SHOTS OVER NEW HAVEN. McGinnis and Dumaine prepare for April's annual meeting..... p. 62

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THE NEW LOOK IN ANTITRUST. For Kodak case, Justice Dept. used new technique to handle it quickly, out of court..... p. 66

WHEN A SMALL COMPANY DIVERSIFIES. Stow Mfg. Co. took the plunge with a new product and came up smiling..... p. 72

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MARKETING:

COLOR TV FADES INTO THE DISTANCE. The new medium wasn't technologically ready to run before it walked; high price, lack of programming blocked sales..... p. 80

FRESH JUICE ENTERS THE LISTS. The newcomer to the citrus juice market costs more than concentrates, has seasonal problems..... p. 88

FTC HITS DOUBLEDAY BOOK CLUB. The commission frowns on its two-price system but upholds right of independent clubs to set their own prices..... p. 90

THE MARKETS:

NOW—BOILING UP TO A TEST. Odd-lot investors have had very little effect on the market's ups-and-downs

WALL STREET TALKS . . . about brokers' loans, Treasury plans, the high cost of hindsight, and a lot more

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THE LIMITED MARKET MILL: IS IT STEEL'S BEST BET? The semi-integrated mill, a new combination of steelmaking units, represents the future to some in the industry.. p. 44

NEW PRODUCTS

REGIONS:

THE INCOME PATTERN: NEW HIGH FOR THE YEAR. In November, income level reached its peak, but it was still below 1953..... p. 54

WATER SHORTAGE . . . in areas feeding Missouri Basin threatens river's transportation and power facilities

STARTLING...the heat resistance of this new plastic film



CHALLENGING to industry...the combination of remarkable properties offered by Du Pont MYLAR*

The amazing stability at extremes of heat and cold is just one of the properties of "Mylar" polyester film that may help you improve a product.

"Mylar" is also the strongest plastic film available.

Its thinness can save you space in the design of equipment.

Its outstanding dielectric strength makes it an ideal insulating material.

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What about your product? This

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Showdown with Red China

● Eisenhower has drawn the line and warned the Chinese Reds not to step over it.

● If the U.S. can make this line stick, there is real hope for eventual stability in the Far East.

● Meanwhile, there is bound to be military probing, and maybe even some actual shooting.

Washington has decided to have things out with Red China. That's what Pres. Eisenhower was saying this week in the message he sent to Congress on the Formosa situation.

The decision for a showdown now could conceivably involve the U.S. in another shooting war—a Korea or worse. But the chances are against anything more than some hot military skirmishing over the next six months—simply because our military edge is so great.

• **Serving Notice**—By putting his foot down now, Eisenhower has given the Communists—both in Peking and in Moscow—notice that we will hit back, hard, if they try another Korea in Formosa. We also say that if they try to force our hand in any of the most important offshore islands, such as Quemoy, we will regard it as evidence of an aim in that direction.

The President and his advisers have decided there is no other way to put a damper on Red China's extravagant ambitions. After five years of successes, the Peking regime is cockier than ever.

• **Ultimate Peace**—There's more to the Eisenhower policy than the toughness that shows on the surface. There's a less obvious long-range policy underneath. Eisenhower has told Peking, and the world, that our real aim is peace in the Formosa Strait.

He means this. To get peace, he is prepared to have Chiang Kai-shek gradually withdraw from the coastal islands the Nationalists once expected to use as steppingstones back to the mainland. Given proof that Red China is prepared to calm down, we might even drop our opposition to Peking's membership in the United Nations and to trade with Red China.

In fact, Eisenhower's chief goal is to draw a clear enough line between the Communists and the Nationalists so they can't get in each other's hair. This

means working out a modus vivendi that leaves the Communists in control of the mainland but keeps Formosa intact as a key link in our chain of defense bases from Japan to the Philippines.

Eisenhower doesn't expect either the Communists or the Nationalists to give up their claims. But he wants the kind of stability we have in Europe, where neither side is shooting even though disputes remain unsettled.

I. How Much Risk?

Whether the Chinese Reds will accept such a situation is another matter. Certainly they won't be in a hurry to. This week Premier Chou En-lai scoffed at any idea of a cease-fire with the Nationalists, demanded in no uncertain terms that the U.S. get out of Formosa.

Chances are, there will be a period of military probing in the coastal islands before there is any serious diplomatic exploration.

• **Lesser Evil**—We might even be involved in what would amount to an undeclared war with Red China. This would be risky, but it might be a necessary step in winding up the whole business. Certainly it's a better prospect than outright war. If military need dictates, we can withdraw from one or more coastal islands without losing face; if we should hit the Communists, it wouldn't mean we were committed to a war to wipe them out.

The U.S. is ready to take the risks in such a situation. Militarily, we are infinitely stronger than we were even two years ago. If the Chinese Reds make any direct passes at our Seventh Fleet, or at Formosa itself, we can retaliate in full. The fleet is equipped with the latest weapons.

• **Washington View**—Washington figures that Moscow is fully aware of all

this, that it won't encourage Peking to ask for real trouble. Red China itself is in no position to meet effectively the kind of power we now have available.

The decision to take a stand on Formosa was strictly a U.S. affair, though our closest allies were kept informed. Formosa, unlike Indo-China, is a place where we have full responsibility—and have the naval and air power to match our commitment. Thus, Washington can make its own policy with a freedom we don't enjoy in many other parts of the world.

Any miscalculation would be serious, of course. But there is no doubt in Washington that we can handle whatever comes. There is no doubt either that risks have to be taken now unless we want to let Red China have a free hand in Southeast Asia.

II. Trouble Brewing

The present crisis has been brewing since 1949, when the Communists completed the conquest of mainland China and left Chiang's Nationalists with no refuge but Formosa and the coastal islands.

It was then that the Mao regime seriously laid claim to the coastal islands and Formosa, too. Since the summer of 1953, it has been obvious that Red China would try to force the issue as soon as it had enough military strength to tackle the Nationalists in the offshore islands.

• **Aid to Chiang**—It has been equally obvious, at least since Red China entered the Korean War, that the U.S. would not let Chiang go down the drain, much less give up a vital strategic position like Formosa. In fact, during the Korean War we entertained the idea of using Chiang's forces for an invasion of the mainland via the coastal islands. That was why we gave Chiang so much help in fortifying island groups such as the Tachens and the Quemoes.

• **Changes**—Since the end of the Korean War, however, two things have happened:

• The U.S. has gradually given up the idea of using force to destroy the Communist regime—unless, of course, Peking provokes a war with us. There has been opposition to this shift within both the Republican Party and the

Administration. But Eisenhower has held out for it.

• The Chinese Reds have accumulated enough air and naval strength (including about 2,000 military aircraft and about 50 Soviet-built PT boats) to take the coastal islands from the Nationalists one by one. Their ability to do so became clear this month in the Tachens, which the Nationalists are now evacuating with the help of the Seventh Fleet.

III. Consequences

As Washington sees things today, these two developments combined to look to Peking like an ideal situation to exploit. The sequence of events since U.N. Secy. Gen. Hammarskjold visited Peking early this month seems to bear it out. No sooner had he left than the Chinese Reds hit the Tachens—a clear indication that they intend to take whatever they can get away with, right up to Formosa.

This posed a real dilemma for Washington. Would we let the Nationalists take a bloody beating—with the prospect that this would not only encourage the Reds to want more but would also destroy the morale of Chiang's army on Formosa?

The decision was to take a firm stand even though Washington realizes that U.S. forces can't hold the coastal islands against a determined Red attack, except by destroying Red military installations on the mainland and thus running the risk of an all-out war.

IV. A Firm Stand

In as complex and dangerous a situation as this, Eisenhower needed a policy that is flexible as well as firm. That's the kind of policy he announced this week.

The new policy is firm in two important respects. It tells Red China:

- For military reasons, we intend to keep Formosa in friendly hands.
- We will not permit a series of Dienbienphu in the coastal islands. That would undermine any anti-Communist regime on Formosa and weaken our whole position in Southeast Asia.

The policy is flexible in that it:

- Makes a distinction between Formosa (plus the nearby Pescadores) and the coastal islands. This distinction makes sense in terms of international law as well as military strategy.
- Allows for intervention by the U.N. to help settle the matter.
- **Diplomatic Strength**—Thus our new Formosa policy is geared for a diplomatic test of strength as well as a military one.

By being ready to make a distinction between Formosa and the offshore islands, we put ourselves in a strong po-

sition politically, if and when the U.N. takes up the question of any cease-fire in the Formosa Strait. With countries that recognize the Mao regime as the government of China, Peking has a perfectly valid legal claim to the offshore islands. They have been historically Chinese and recognized as such.

But the same is not true of Formosa. China's claim to it may go back some centuries but it was under effective Chinese control only during the 19th Century. From 1895 to 1945, Japan controlled Formosa. Since then, the Allied powers that made the peace treaty with Japan have held title to Formosa and the Pescadores. With

one exception—the 1943 Cairo declaration—the U.S. never officially conceded China had any right to Formosa.

There is no thought in Washington, of course, that the Communist regime will give up its Formosa claim. But U.S. officials hope that we can finally force Peking to accept at least a de facto cease-fire in the Formosa Strait. If this could be guaranteed in any way by the U.N., and Peking agrees to live with it, then the U.S. would be prepared to concede the coastal islands. Meanwhile we will hold on to whatever islands seem useful in the defense of Formosa or as bargaining points.

Behind the Ford Promotions

Ford Motor Co. is strong and getting stronger. Elevation of Lewis D. Crusoe to head the three auto divisions points to new sales efforts in all price classes.

This week's top management changes at Ford Motor Co. point up more sharply than ever how much the company has grown since the war. They also suggest which ways Ford will move competitively in the future.

The top-level changes:

- Ernest R. Breech moves up from executive vice-president to chairman of the board—a post never before created, even for the elder Henry Ford. Breech continues to act as deputy chief executive officer in close teamwork with Pres. Henry Ford II.

- Lewis D. Crusoe moves up from vice-president and general manager of the Ford Div. to executive vice-president. He takes on only part of Breech's former post; he will be top boss of the three auto divisions: Ford, Lincoln-Mercury, and Continental.

- D. S. Harder, former vice-president in charge of manufacturing, also becomes an executive vice-president. He will run the manufacturing divisions.

- **What It Means**—Since the war, Ford Motor Co. has been remade. It has been split into divisions; it has spent nearly \$1.5-billion on new facilities; it has created two new divisions (Tractor & Implement and Continental) in the past two years alone.

The company's business has boomed, too, and the promotions are partly a reward to the men responsible. Ford's share of the car and truck market has jumped from 22.7% in 1952 to slightly above 31% in 1954. Official registration figures won't be in for a month or more (BW-Jan. 8'55, p32), but Ford people are sure that their name brand beat Chevrolet for sales leadership in 1954.

With this kind of business growth, Ford decided to spread management re-

sponsibilities, and also to emphasize certain areas of its expansion. That's why the two executive vice-presidencies were created; Breech's elevation in rank was automatic, to keep him in step with the other posts.

- **New Campaign, New Car**—Crusoe's appointment to manage the three auto divisions is the most significant change in the line-up. Crusoe was the driving force behind the Ford Div.'s rise to leadership (BW-Nov. 13'54, p83). He is insistent on the need to offer a car for every price class.

The industry reads into Crusoe's promotion these two effects:

- A greater sales effort for Mercury. One Detroit said, "I suppose the new slogan will be 'Beat Buick'."

- Another new car in the Ford Motor Co. line. This car would be in a price class between Mercury and Lincoln. It seems clear now that the Ford company has plans for such a car. Crusoe will doubtless push them.

- **Moving Up**—Promotion of Crusoe and Harder makes room for the younger set of Ford managers to move up.

Crusoe's former post is filled by Robert S. McNamara, 38. With a wide knowledge of economics, statistics, and business management, McNamara became controller of the Ford company when he was 33; he has been Crusoe's assistant since 1953. McNamara heads up a corps of young economic-management planners Crusoe has been building up in the Ford division. They have been drumming a central theme into the dealer organization: Management is the key to profits.

Harder's place in the Ford Division is taken by Dwillard J. Davis, who has been director of manufacturing engineering.



ECONOMIC ADVISERS Arthur Burns (with pipe), Neil Jacoby, and Walter Stewart (right) drafted Eisenhower's economic report.

THIS WEEK CONGRESS LISTENS TO THE . . .

Official Word on the Economy

The three men in the foreground of this picture, who are collectively the Council of Economic Advisers, spent much of their time this week before the Joint Congressional Committee on the Economic Report. Their purpose was to clarify the 1955 edition of the annual report for the legislators' benefit, to explain the thinking in it and behind it.

In doing so, they dwelt—as does the report itself—on two things:

- The U.S. economy—where it has been and why, and where it seems likely to go from here.

- The policies of the Administration toward the economy.

- Sessions—On Monday, CEA and the legislators held their meeting behind closed doors and off the record. On Wednesday began a series of open sessions with a panel of economic experts from business, government, and labor.

Few of the experts had many quarrels with the report's analysis of last year's recession, and, by and large, they shared the Administration's optimism about 1955. One exception was Leon Keyserling, former CEA chairman. Keyserling called the report complacent.

Keyserling argues, for instance, that complacency shows up in the Administration's apparent lack of concern over unemployment. He wants the government to stimulate production to

a point where the unemployed are gathered in.

The Administration, on the other hand, is nervous about the risk of over-stimulating economic activity—perhaps creating a boom that would end in a painful slump. As the Administration sees it, government should be ready to act in a recession, but it should not interfere with the economy needlessly.

I. Administration Thinking

The President's Economic Report, an annual analysis required by the Employment Act of 1946, is largely the work of CEA—Arthur F. Burns, Neil H. Jacoby, and Walter W. Stewart. These men did most of the analytical spade-work and fact-finding for the report now being perused by Congress. But other Administration officials with responsibility for economic policy had a hand in it: men such as Treasury Secy. Humphrey and Commerce Secy. Weeks. Thus, the report actually represents collective Administration thinking.

As such, it is fair game for a Democratic Congress. With two Democrats heading the joint committee—Sen. Paul H. Douglas as chairman and Rep. Wright Patman as vice-chairman—you might expect a good deal of political haymaking. But this has not been the

case. Present economic conditions, and the experience of 1954, set too pleasant a scene for sharp words.

The fact is that few experts can seriously challenge the Administration's diagnosis of the national health. The patient has weathered a mild illness, is now in good shape, and shows every sign of increasing vigor in the months ahead. The 1955 report is full of optimism, mainly because of the Administration's success in combatting last year's recession.

The government last year built a program designed primarily for 1954. Now, with business recovering instead of drooping, the Administration is thinking in terms of the long pull. It is aiming at 10 years of growth.

- Position—The economic report talks at length about the government's role in that growth, as Pres. Eisenhower and his men see it. Their view of the role is a new one. Some of its features have emerged from Eisenhower's acts and speeches. The philosophy is codified in the report, something like this:

- The government has a big part to play in checking declines, keeping booms in hand, promoting expansion. "Failure or reluctance to play its part can be a serious handicap" to the economy.

- But the government's role is not

unlimited. Government is not a substitute for private enterprise; it is a supporting partner. The private sector of the economy must generate jobs and income. Government's responsibility is to create confidence in the abilities of private enterprise.

- This means making sure of an environment that will encourage private initiative. To do that, the government must curb monopolistic practices by both business and labor. It must fight tendencies toward deflation and inflation. And it must carry out "as much of its own work as practicable through private enterprise."

- The nation's economic foundations can be strengthened through cooperation among federal, state, and local governments.

- By providing public physical facilities such as roads, schools, and hospitals, government on various levels can help the private sector's advance.

- Social security measures must be pushed so that no section of the population acts as a ball and chain on business expansion.

- **Middle**—These principles identify a rather clear-cut position, which can be differentiated from more extreme views on either side of it. The real New Dealer will see the Eisenhower philosophy as a minor step in the right direction, but no more. The old fashioned, laissez-faire Republican will feel doubly betrayed.

For example, the New Deal remedy for a recession would involve heavy federal spending and deficit financing. The old-line Republican approach would be to let the economy work things out for itself. Eisenhower's prescription calls for some federal spending and lower taxes—a system that helps keep deficit spending in bounds.

Or take taxes. The New Dealer would favor consumers; the hard-rock Republican would go easy on business. Eisenhower tries to split tax cuts evenly between them.

Or take public works. New Dealers have asked the Administration to underwrite 75,000 public housing units a year. Old-line Republicans, who would encourage state and local spending, have fought against any federal housing at all. Eisenhower's goal is 35,000 units a year.

II. The Recession Story

The Administration likes to point out that its approach worked during the 1953-54 recession.

The charts on these pages tell the recession's story. According to the economic report, it was an inventory recession on the classic pattern, "complicated and aggravated" by a sharp cut in government military spending. Industrial production dropped; overtime

faded; the work week was cut; unemployment rose sharply.

But the slump did not turn into a depression—and, according to the report, this was no accident. The Administration not only played a big part in stopping the slide, the report says; it also helped pave the way for the present level of recovery.

The report gives first place for effectiveness to the government's indirect fiscal and monetary policies. Tax cuts for both corporations and individuals helped push disposable personal income to a new high even while wage income was falling; and, as the lower left-hand chart shows, consumer spending rose cheerfully right through the low ebb of 1954. Then there was the Federal Reserve's easy money policy, which helped create confidence by assuring borrowers an ample supply of low-cost money. Coupled with the Administration's liberalizing of mortgage terms, this helped make a boom in the construction industry.

The Administration feels that its actions built up confidence. Consumers and business alike kept spending; they almost made up for the drop in military buying. Gross national product in 1954 was only 3% below that of 1953. It was the mildest full-fledged recession in U.S. history.

- **Plans**—The Administration plans to put the same policies into effect in the future. It counsels against a further tax cut this year, but virtually pledges one in 1956. At the same time, it wants higher unemployment compensation, a higher minimum wage, and new spending for schools and highways. It feels these things are vital to long-term expansion.

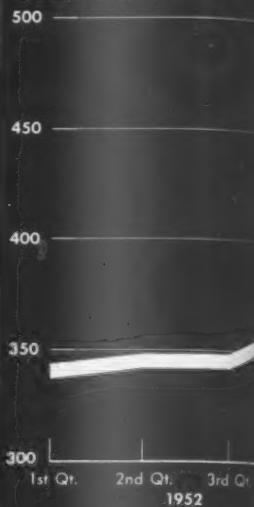
Most politicians and economists agree with the report's analysis of the past, but there are bound to be arguments about its view of the future. Labor unions, for instance, are not satisfied with the report's confident prediction that "we shall achieve a high and satisfactory level of employment and production within the current year." They want a much more specific definition of what the Administration considers a satisfactory level.

Then, too, some economists argue that the experience of the past year did not constitute a real test of the Administration's policies. They don't think 1954's economic troubles were really formidable enough to challenge the effect of such automatic stabilizers as unemployment compensation.

The Administration takes exception to this view. It feels that the experience of 1954 is proof that its policies work. It doesn't claim to have wiped out all threats of inflation or deflation, but it stands by the view that "wise and early government action can stave off difficulties later on."

After the mildest recession

Gross National Product
in billions of dollars



*Preliminary estimate by CEA



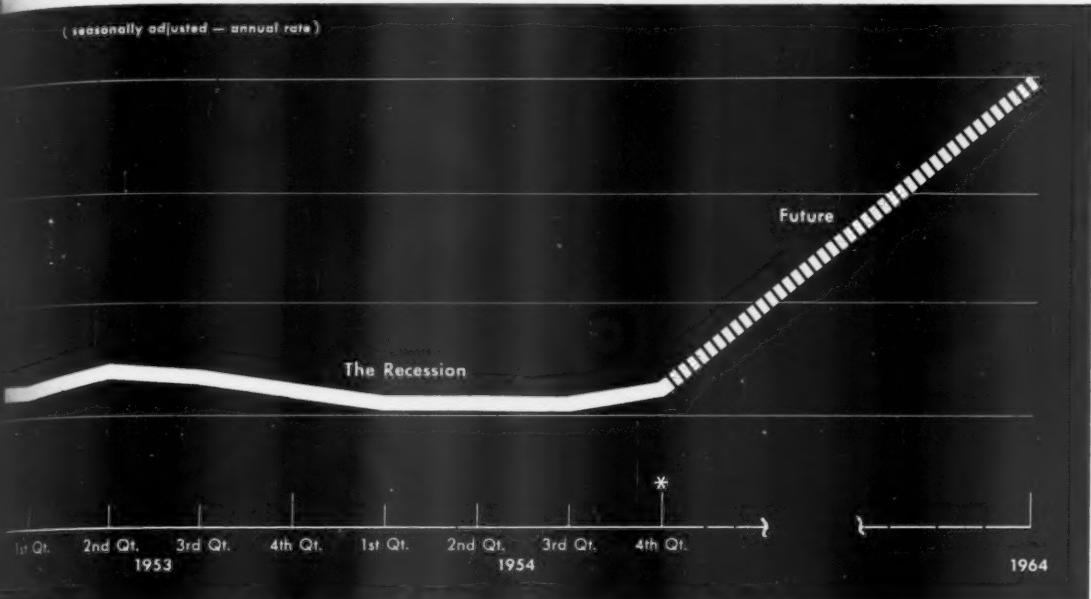
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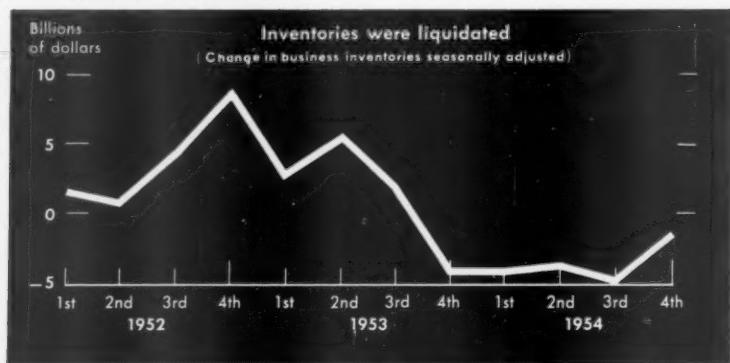
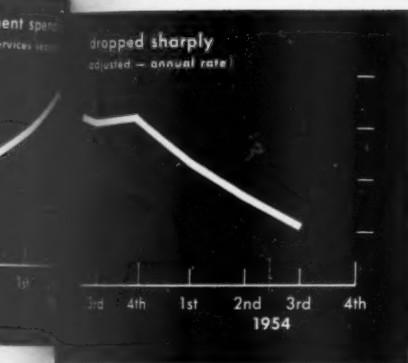
Source: Department of Commerce

destress in history, the Administration sets its sights on expansion

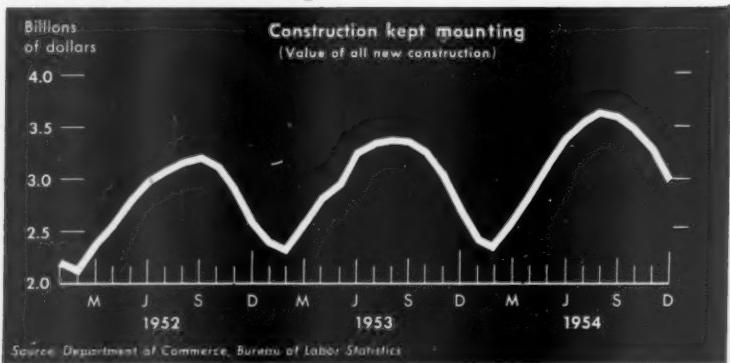
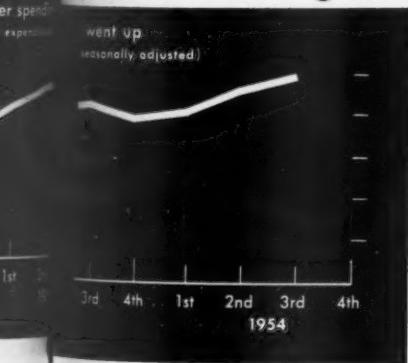
(seasonally adjusted - annual rate)



1954 had the makings of real trouble



But these strong elements saved the day



Source: Department of Commerce, Bureau of Labor Statistics.

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1955: Cashing In on Cost Cuts

● 1954, with its production slide, was biggest cost-slashing year for U.S. manufacturers since prewar.

● The operation was successful as to over-all costs, but lagging output helped keep unit costs up.

● For 1955, manufacturers see the payoff: production up again, without the old high costs.

The year 1954 was probably the first time in 15 years that factory managers all over the country sharpened up their paring knives and went to work on a serious and thorough job of cost slashing. The reason was plain. With production figures sliding down from the 1953 peaks, plant managers looked to a cut in costs to maintain profit levels and to get production on the upgrade again.

• **Results**—The great majority of manufacturing plants found there was a lot of accumulated fat that could be pared off. Plant managers right across the country told BUSINESS WEEK reporters last week that 1954's cost slashing had brought real results.

Some of the savings came at the production level. New machines, better planning, tightening controls over materials meant more output per man-hour and a saving in direct labor costs.

Many firms swung the ax at tougher growths, too—the jungle of overheads that can swamp even the most efficiently run plant. Old equipment was junked; sales forces were culled; front office hands were carefully evaluated. Wide swathes were cut through the puffy overhead costs that had grown up in the hurried make-ready for Korea.

In spite of these gains, there was one lag. Many factory managers told BUSINESS WEEK reporters that the savings have failed to show up so far in unit costs. One trouble there was that not enough units were being produced to spread the overhead savings.

• **Prospects**—But with output rising, most manufacturers look to 1955 to bring in the dividends from 1954's paring operation. They hope to hold costs down to the lower levels while unit production rises.

That's what one optimistic factory manager meant when he said, "We have a feeling we know more about what we're doing, and we know better how to run a tight shop."

Some December figures seem to bear out the hope. In that month, factory production was up 4% from the same 1953 month, but production man-hours were 4% below the year-ago level.

These figures point up another side

of the picture, too: A return in 1955 to former high production levels may not mean a return to former employment levels. Production might have to break through to new peaks to achieve that.

One Midwest steel producer observed: "Even if the volume of production approached the peak of 1953, employment would not match it. Much of the company's equipment is a great deal faster than the old facilities. In other words, fewer men can produce the same as a larger force once did."

• **Challenge**—There are some doubts, too, whether the paring knife has finished its work yet. In the words of one large maker of electrical machinery, "We can go a hell of a lot further in cutting costs. 1955 will be a challenging year for management."

I. Where the Cuts Came

Almost any manufacturer will agree that greater efficiency is the only way a modern company can keep up with higher material and labor costs. Ask him how he does it, and he'll tell you, "Cutting costs is nothing dramatic. It's hard work, entailing a million details. It's plain murder."

• **Top to Bottom**—For some plants, cost cutting has meant a blueprint by blueprint, part by part study by the production, design, purchasing, and methods people.

Take the case of a Midwest machinery maker. It was faced with the possibility of ultimately having to shut down one plant that was losing money—an old, high-cost plant poorly located for both materials and market. So the company's top management concentrated on a thoroughgoing shakedown of this plant.

• An analysis of product lines revealed many common parts. Bunching production of these, then putting them on the shelf against predictable demand, brought an element of repetitive manufacture into what had been a job shop operation.

• "Make-or-buy" studies showed the plant was buying more sizes of steel bars under 3-in. diameter than it needed; now it buys an entire heat of

steel, has it rolled into a stipulated number of sizes.

• Replanning and rescheduling operations saved clerical hours, cut down on plant overtime.

• Engineering, plus an incentive wage program, cut rejects to 60% of the 1953 total.

Adding up these grubby details, management can now see at least a 10% cut in production costs at this one plant—a tangible minimum saving of 3% on its sales volume. It means the plant will start to make money again.

• **Many Ways**—Other manufacturers, instead of cutting across the board, have chopped at one particular spot.

Materials handling was one target. One machinery maker put in automatically controlled handling tables at the delivery end of his plant, cut the labor force at this end by 50%, found this stepped up the entire shop output a bit, too. A farm equipment maker got increased output efficiency by linking machine operations and eliminating employee handling altogether.

New machines or new plants, designed for a specific task, often brought hard-to-believe gains. Over the long term, labor productivity has been rising about 3% to 4% per year in manufacturing. New equipment often meant 15% to 30% spurts.

One manufacturer had some doubts on this score, however. "Cutting costs through automation isn't as simple as some business editors write," he said, adding that it takes a lot of production to make expensive machines pay.

Reduction of inventories, a matter of necessity last year, also meant savings, one West Coast manufacturer discovered: it saved storage space, insurance, handling costs. He's keeping a closer watch on inventories now.

Manpower costs proved a big field after the stand-by crews and repair crews that build up around the edges of production. "In boom, hurry-up times," one employer explained, "a department head might keep miscellaneous labor around to have it there simply if others failed to show up. No more of that. It's not that anyone is working harder. It's just that you don't have a lot of surplus labor around to give leaf-raking jobs to."

New personnel policies paid off for some factory owners. Incentive wage plans increased output. Employers were a lot more selective in hiring.

Freight and material costs made the big difference in other cases. A farm equipment maker who just moved South found he saved more from being nearer the market than from the new

machinery in his new plant. A Houston brewer offset a rise in wage rates by some cuts in raw materials costs.

But some producers found they were bumping their heads against the cost of things they bought—like a refrigerator equipment maker who uses a lot of wood for crating, and complains that inefficiency in the lumber industry keeps his own costs up.

II. Today and Tomorrow

Despite these real cuts in over-all costs, many producers find their unit costs have continued to rise. The story is the same, whether it comes from a New England chemical firm, or from a Midwest machinery builder whose output per man-hour has risen 25% since 1946 without budging his unit costs.

As far as 1954 is concerned, the machinery man blames the shift on a buyers' market. "You have to start making what the customer wants, not what he'll take," he says, "and all your efficiencies and cost savings get lost in making so much of this and so much of that."

With factory output off about 7% from its 1953 peak, sharp cutbacks at some factories and the burden of idle equipment also made it harder to keep unit costs under control.

• **What's Ahead?**—With production rising, there will be less of this unproductive overhead to carry in 1955. To balance that, factories will probably have to pay more for the things they buy this year; raw materials and labor may both be costing a little more (BW-Jan. 15 '55, p27).

Most manufacturers think, though, that they can get back to 1953 production levels without a similar rise in the work force. Most of them expect that 1953's record of 17-million factory employees will not be reached again in 1955. They figure it this way.

Factory employment in 1954 was off 1-million from that peak, averaging 16-million for the year, and ending the year at 16.1-million. Rising output in 1955, even allowing for the new, built-in savings, will probably add 500,000. That is still some 400,000 shy of 1953's peak.

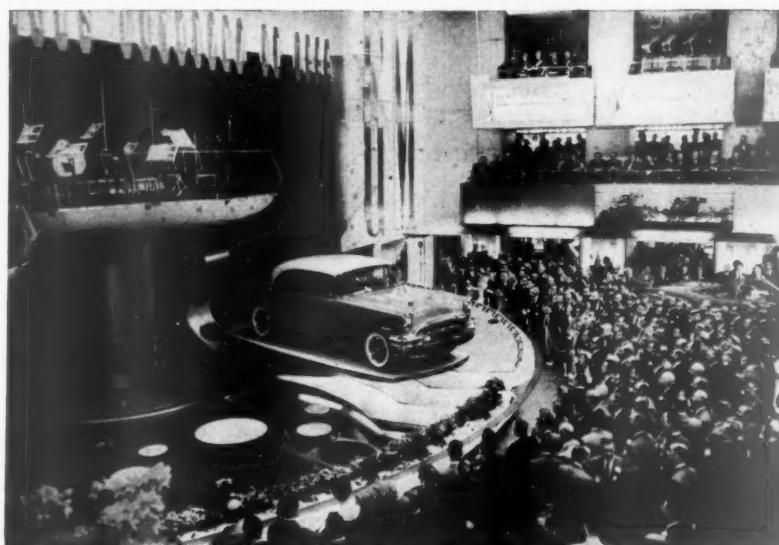
What happens to these 400,000 depends on at least two things: (1) how fast new companies and new lines in existing companies can get started and absorb workers, and (2) how much of the man-hour savings will stick once orders start pouring in again.

Some companies with sharp increases in orders in 1954's last quarter already think they are losing some of their hard-won efficiencies. A Midwest auto parts supplier laments, "Now, with the plant going six and seven days a week, we've thrown caution to the winds again."

Two Ways to Push Car Sales:



Look at All Three—Plymouth



\$2-Million Extravaganza—GM

More ingenuity, more money are going into sales promotion by auto companies and their dealers.

In Detroit, a Plymouth dealer named Thomas T. Petzold thought up the idea of playing the "look at all three" theme quite literally. On his showroom floor (top picture) he lined up comparable stock models of (left to right) a Ford, a Plymouth, and a Chevrolet. Adhesive tape markings on the floor help the shopper compare bumper-to-bumper lengths—Plymouth happens to be longest—and cards note luggage capacity—Plymouth has the most.

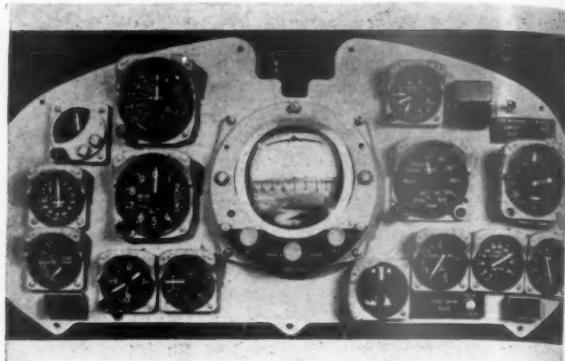
Petzold has a retail store background, believes shoppers should be able to compare items side by side, as in a department store. Last weekend, his salesmen wrote three times as many orders as usual—and referred one man to a competing dealer when he liked one of the other two cars better.

Meanwhile, General Motors closed its \$2-million Motorama in New York (bottom picture) and sent it on to Miami for a showing next week.

GM said that the show sold \$1.2-million worth of cars in the New York stand.



TODAY An airplane instrument panel is a jumble of dials and knobs, requires expert reading, may cause errors.

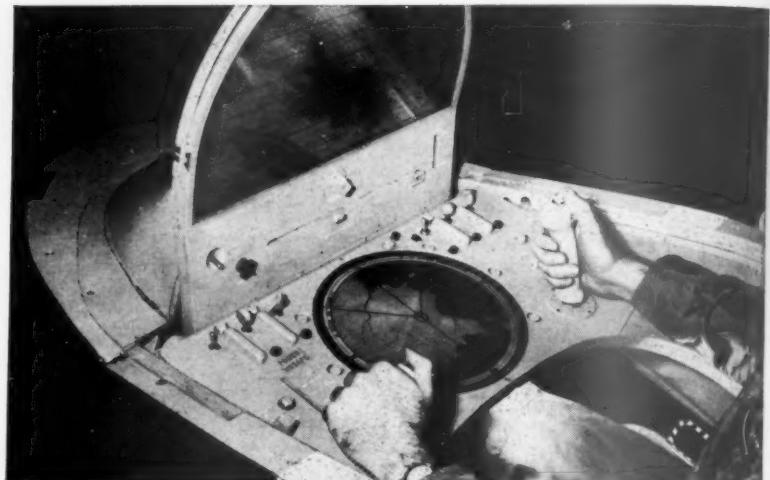


TOMORROW

Simplified panel with fewer instruments, better grouped, is being flight-tested.



TRICK A flat, transparent TV tube, just developed, opens way for completely new type of instrument panel.



FOR THE FUTURE Two basic instruments—both TV tubes—will simulate visual flying. Semicircular plate in front of pilot (transparent during contact flight) shows altitude, speed; round plate gives mileage, other data.

Flying by TV Will Be Simpler

The simple instrument panel shown in the picture at the lower right is no longer just an airplane pilot's dream of a happier future. The first big step toward it came last week with the announcement that West Coast Electronics Div. of Willys Motors, Inc., has developed the flat plate television tube that will in time make the simpler, easier-to-read panel a flight reality.

The announcement marks the first milestone in the Navy's long-range program of instrument simplification—which aims to make flying by instrument resemble as closely as possible flying visually. This could cut instrument training time by as much as 75%, and increase flight safety by reducing chances of error.

• **Mockup**—That's the eventual goal of the TV-tube instrument panel now in the mockup stage. Willys Motors' flat, transparent, TV picture tube is

used in both of the basic instruments in the mockup of an attack aircraft cockpit built by Douglas Aircraft Co. (picture, lower right). The flat tube, approximately 3 in. thick, consists of a phosphor screen sandwiched between glass plates. The scanning beam of electrons comes in from the side, is controlled by transparent electrodes.

All the information needed by a pilot to operate his aircraft can be superimposed on the two TV tubes.

The vertically mounted, semicircular plate directly in front of the pilot will show altitude, speed, and attitude of the aircraft, as well as physical features such as mountains that he would see during contact flight. (During actual contact flight, however, the plate will be transparent and will not interfere with the pilot's vision.)

The round plate, horizontally mounted in front of the pilot, will

show broad physical features of the earth below, and data such as number of miles to the base, fuel remaining, and the like. On both instruments, physical features will not be pictured, but depicted artificially, with the result looking something like a radar map. The use of TV tubes permits several items of information to be superimposed, and used as needed.

• **Interim**—The Navy figures it will take another three years before the first experimental aircraft using this simplified instrument panel can get into the air.

But the research for the new program will get some results before that, in reducing the number of instruments now used and grouping them to bring related data closer together. The first panel of this type (picture, upper right) is to be installed in fighter aircraft now in production.



What's New in Steel Service

Again in 1955, as in every year since 1842, Ryerson is setting the steel-service pace. Many advances in our ability to serve you have been made in recent months—many more are immediately ahead. Briefly, here is what you can expect:

EXPANDED STOCKS—Amazing new leaded alloys in three carbon ranges—carbon steel plates produced to an "easy-welding and forming" specification—304L and 316L stainless plates and sheets for superior welding characteristics—type 430 stainless sheets for those who want an alternate to higher priced 18-8 stainless. These are a few recent additions and further stock expansion is already under way.

NEW QUALITY SAFEGUARDS—Steel you order from Ryerson now protected by a whole new set

of quality control standards—tighter than any thought possible before. As evidence of uniform high quality we can furnish a certificate of analysis or a mechanical properties report for every pound of steel we ship.

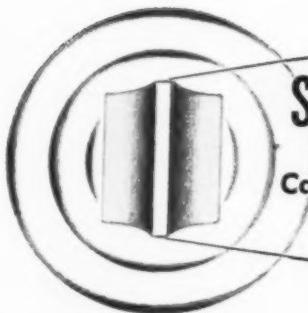
STEPPED-UP SERVICE—On 92 to 98% of the regular orders we receive, steel is cut and shipped the same or following day. With two new plants getting into operation, and with facilities enlarged and modernized from coast to coast, we'll do even better in the weeks ahead.

So here's our steel-service pledge to you—an even wider selection of steels, dependable high quality, delivery where you want it—when you want it—now and throughout 1955.

RYERSON STEEL

*In stock: Bars, structurals, plates, sheets, tubing,
alloys, stainless, reinforcing, machinery & tools, etc.*

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE, N. C. • CINCINNATI • CLEVELAND
DETROIT • PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE



SOUND TALK

by

Carl W. Lemmerman



WE SOLVED THIS PLANT'S NOISE PROBLEM WITH A "TUNNEL OF SILENCE"

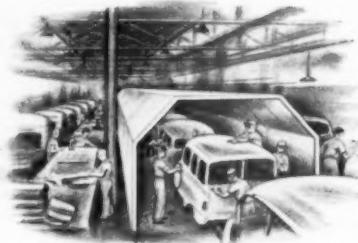
Here was the situation: at a large auto plant, body sections were welded together, then moved along an assembly line to the grinding area. There the roughness of the welds was being chipped and ground smooth, preparing the surfaces for painting. And that was the trouble spot. The grinding operation, while vital, set up such an ear-piercing, penetrating screech that workers in surrounding areas were driven to distraction. Production was suffering. Proper supervision was practically impossible. Tempers were short; morale at a low ebb.

ISC TO THE RESCUE

The auto body company contacted us, said: "Do something!" And we did. Our on-the-scene Silence Survey indicated that a special sound suppression enclosure was required. ISC designed and installed a 150 foot "tunnel of silence" within which the deafening grinding noise could be confined.

TUNNEL OF SILENCE

Results have been most satisfactory. Supervisors of other departments near the assembly line, including inspection, report that production has picked up (both in quantity and quality) and worker morale is vastly



improved. And because the ISC Soundmetal Panels of which the tunnel is constructed break up sound waves, the noise level is even reduced inside the tunnel.

NOISE CONTROL: A PLANT ASSET

You'll find that controlling noise can work wonders in your plant. Reducing noise levels scientifically will lessen worker fatigue, increase production, lower accident rates, improve employee morale and community relations, and eliminate the danger of deafness claims.

Why not write direct to me, outlining your noise problem. Whether it is big or small, it will receive prompt attention.

Carl W. Lemmerman

Be sure to request a copy of our complete catalog "Silence Service for Industry."

SILENCE
SERVICE

Industrial Sound Control Inc.

45 GRANBY ST. • HARTFORD 12, CONN.

"SOUND ENGINEERING"
FROM SURVEY TO SILENCE

AVIATION • INDUSTRIAL •
AIR CONDITIONING

BUSINESS BRIEFS

Machine tool orders perked up in December, and show signs of holding the pace in January. Industry sources say December orders were the highest in 15 months, in sharp contrast to November, which hit a 4½-year low. December also topped the year-before figure—by 36%—the first gain showed by a 1954 month over its 1953 counterpart.

Yes, no, and maybe: Directors of Sunray Oil Corp. and Mid-Continent Petroleum Corp. have agreed in principle to merge (BW-Jan. 22 '55, p34). Pending stockholder approval, Mid-Continent has delayed the vote on a proposed 4-for-1 stock split. . . . Libby, McNeill & Libby is not considering any merger, Pres. Charles S. Bridges has informed shareholders. . . . Hobbs Battery Co. is dickering to sell its shares to a large, unnamed battery maker. An unusual flutter in Hobbs stock caused Pres. B. A. Olsen to tell stockholders of the possible sale.

Southern newsprint capacity will be boosted an annual 100,000 tons when International Paper Co. builds a \$20-million mill planned for a site to be named later. Up to now Canada, with a 6-million-plus tons of annual capacity, has been supplying 80% of U.S. newsprint needs.

The cigarette dip slowed in November, judging by Internal Revenue Service figures on withdrawals. IRS said manufacturers put 29.7-billion cigarettes into the pipelines for the month, a decline of only 2% from the 1953 month. It was the smallest monthly decline since August and compares with a 4% average decline for the first 11 months of the year.

Taking stock: The New York Stock Exchange's plan for the monthly buying of shares now has 28,800 customers, and is adding 100 a day. The investment already has reached \$11.5-million, says Keith Funston, Exchange president. . . . R. J. Goerke Co., Elizabeth (N.J.) department store, is teaching its employees the intricacies of the Big Board. The idea: to get them interested in owning a share in American business.

Win a prize in 1955: That's when TWA will judge the entries for its essay contest—200-word descriptions, written now, of the state of commercial aviation 30 years hence. The promotion gimmick is powered by a \$50,000 prize.



Contact **KAYDON** Muskegon

FOR ALL TYPES OF BALL AND ROLLER BEARINGS: 4" BORE TO 120" OUTSIDE DIAMETER



KAYDON single row, tapered roller bearings 12.125" x 13.250" x .718"
Total bearing weight: 3.15 lbs.

KAYDON creates world's THINNEST tapered roller bearings—REALI-SLIM as a wedding ring

Here's another first by KAYDON of Muskegon. We now offer the thinnest single row, tapered roller bearings ever made. Even a bride's modern wedding ring, made to proportionate size, would not be as thin or light in weight as one of these Reali-Slim bearings.

If you're faced with bearing problems, which involve conserving space and weight, consult KAYDON while your product design still is on the drawing board. Remember — for standard bearings or bearings of unusual design you can depend on KAYDON for the engineering skill and manufacturing facilities to do your job. It pays to contact KAYDON first!

Write for engineering catalog!

For complete data on capacity, seals, separators, standard and Reali-Slim "wedding ring" bearings, ask for catalog No. 54.



THE

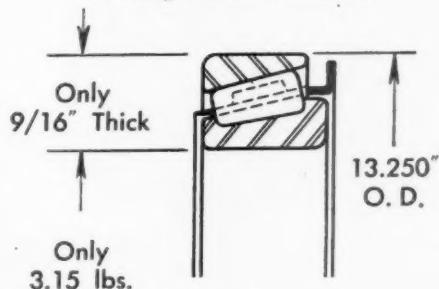
KAYDON

MUSKEGON • MICHIGAN

ENGINEERING CORP.

K-551

Details of thin section, lightweight bearing shown above



KAYDON types of Standard and Special Bearings:
Spherical Roller • Taper Roller • Ball Radial • Ball Thrust
• Roller Radial • Roller Thrust • Bi-Angular Bearings

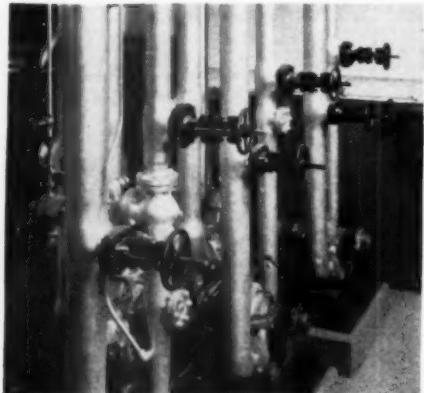
P R E C I S I O N B A L L A N D R O L L E R B E A R I N G S



at
Northland Center
 . . . world's largest
 regional shopping center

Architect: VICTOR GRUEN, Associated Architects and Engineers, Inc.
 Chief Mechanical Engineer: JOSEPH B. OLIVIERI
 Consulting Mechanical Engineers: H. E. BEYSTER & ASSOCIATES, INC.
 General Contractor: BRYANT AND DETWILLER CO.
 Plumbing and Heating Contractor: THE DONALD MILLER COMPANY
 Air Conditioning Contractor: CARRIER CORPORATION

JENKINS VALVES control 50 miles of piping



JENKINS VALVES installed at Northland Center include all types of bronze valves, as well as iron and steel valves up to 24" diameter. Above are valves controlling flow through boiler feed pumps at the steam generating plant. Refrigerating equipment in this same central power house provides chilled water for cooling, which is piped and metered to all stores, at the rate of 10,000,000 gallons per day. Water needs equal those of a city of 50,000 population. Fire protection system includes 5000 automatic sprinklers and 25 hydrants, served by 200,000 gallon water tank.

JENKINS LOOK FOR THE DIAMOND MARK VALVES



Jenkins Gray

SOLD THROUGH LEADING INDUSTRIAL DISTRIBUTORS

For new installations,
 for all replacements,
 let the Jenkins Diamond
 be your guide to
 lasting valve economy.
 Jenkins Bros., 100 Park Ave.,
 New York 17.

W
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Detroit's new \$30,000,000 Northland Center is a shopper's dream. Centered in a parking space for 8341 cars, more than a mile of stores permit "one-stop" shopping for any merchandise or services desired.

Every facility at Northland was planned to provide cost-saving efficiency for store operators along with exceptional comfort and convenience for shoppers. Many design and engineering innovations were required, notably in the plumbing, heating, air conditioning, and fire protection systems. Jenkins Valves were chosen for thousands of control points on the 50-mile network of piping involved to assure trouble-free performance, safety, and long-range maintenance savings.

This confidence in the extra measure of efficiency and economy provided by Jenkins Valves is shared by leading architects, engineers, and contractors in every field of construction. Despite this extra value, *you pay no more for Jenkins Valves.*

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
JAN. 29, 1955



A BUSINESS WEEK

SERVICE

Washington's best advice is to take the Formosa crisis calmly. The risks in what Pres. Eisenhower and Congress have decided are big, of course, and could bring reactions from Red China that would force changes in everybody's plans. There's planning—both military and economic—to meet such a contingency. But officials say it's no more than "normal precaution."

The overwhelming agreement: There will be no great upheaval, no new Korea, no World War III. That's the feeling all around Washington, among Democrats and Republicans alike.

— • —
The reasoning behind the Formosa action: What Eisenhower, with almost unanimous Congressional backing, presents to Red China is a statement in simple, straightforward terms of what has been U.S. policy all along—that we will not let Formosa and the islands close around it fall to the Reds. To keep that from happening, we will fight a "local" action, and the military is willing to gamble that such action will not involve us in major war.

This, in a way, stabilizes military policy, and so stabilizes plans that automatically follow military policies—plans that affect materials buying, prices, wages, investment, and the like. Chances of a new "mobilization" are slight.

— • —
As Washington officials see the "war" resolution, it's a major chess play in dealing with the Reds. Washington calculates that a show of U.S. military determination will cause Red China to back away from any serious attempt to attack Chiang Kai-shek's home grounds. The U.S. is not just bluffing, but the Administration feels it is not flirting with big war, either.

Congress' almost unanimous backing reflects that view, too. Though the form of the resolution parallels the grave steps that precede declaration of war, members of Congress voted this week in an atmosphere devoid of war tension.

— • —
Washington sees little likelihood of a scramble for goods even if the Navy and Air Force actually begin to shoot. Scare buying of consumer goods is discounted, and so is any unusual buildup of industrial raw material inventories.

The strategic stockpile is at or near the goals on most items. The government does not expect a scramble for goods if things go as planned—that includes even sporadic shooting, but, of course, not war.

— • —
Business implications are few, if any, at this stage. The military says it can retaliate, if the need comes, without a new round of mobilization for men, or materials. The Administration will attempt to stay within its budget for defense, though Congressional efforts to increase appropriations now obviously have a better chance to succeed.

Experts discount the parallel between today and the eve of Korea. They agree only that we are coming out of an economic downturn now, just as we were then. But they see no comparison of our economic needs for expansion for defense then, with our capacity "in place" now.

— • —
Stand-by authority to control the economy is now more sure. Even before the China-Formosa situation got hot, the Administration had come around to wanting a more sweeping Defense Production Act. Now con-

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
JAN. 29, 1955

gressmen who voted Eisenhower his "trigger" authority will insist that other preparatory steps be taken, too, if only on paper.

Eisenhower has pulled off a major political victory—so far. He has forced Democrats, and dissidents in his own party, into his camp. By putting the issue up to Congress, he has got all sides committed. Democrats are grumbling some, recalling the "Truman's war" tag the Republicans slapped on the Korea fighting. But they admit they have to support Eisenhower, and they take their hats off to his political skill.

Winning over the "China wing" of the GOP is crucial to the Administration's future actions. Its plans for Asian defense and for a "coexistence" policy toward the Soviet Union were open to attack as long as Sen. Knowland and his followers had room in which to protest U.S. actions. Now that wing, and the even more extreme McCarthy fringe, are pretty effectively forced to go along with Eisenhower's next steps.

How long they'll stay stuck is another matter. The Administration is privately saying it no longer is committed to putting Chiang back on the China mainland—a crusading goal of the Knowland wing. They'll back the President on Formosa but try to steer him away from abandoning the goal of a recapture of China by Chiang's Nationalists.

Any Democratic move to cut taxes, effective next Jan. 1, has now been blocked. Sen. Byrd, the Finance Committee chairman, had already lined up effective opposition to such legislation, and the Formosa situation nailed the plan.

The Administration's freer trade policy is being bolstered from one quarter that might easily have got out of step. The President's Cabinet committee on fuels policy is making its report—and has decided against recommending oil import restrictions. Even so, the Administration may assure domestic producers it will try to keep imports inside 1954 totals.

Restrictions on oil and other imports still will be sought in Congress, though. Hearings on extension of the reciprocal trade program are now getting the views of domestic industries. But Eisenhower still can count on majority support for more liberalized tariffs, and no hitch to the three-year extension appears in sight.

A long-held-up Cabinet committee report on transportation is now about ready to come out. Some recommendations aimed at helping railroads can be expected, perhaps along these lines: some relief from rigid Interstate Commerce Commission rate-making to let railroads have a better chance to compete with airplanes and trucks; an effort to make airlines and trucks pay more of the cost of maintaining airports and highways. What comes of the report will depend almost solely on how much push Eisenhower puts behind it.

The government will announce some major decisions on use of the atom for industry soon. It has prepared a detailed program on the secrets and materials it will let business have. The program will be given to Congress next month; it will include regulations on licensing, prices for fissionable materials, etc.

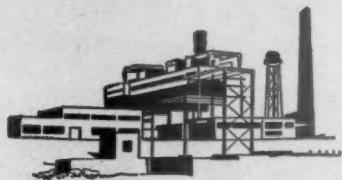
Lummus gives you



Petroleum Refineries

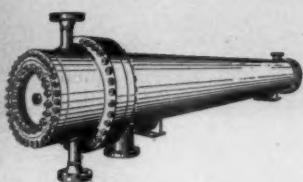


Chemical and Petrochemical Plants

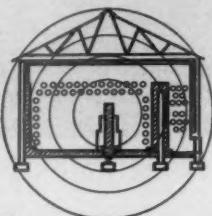


Power Plants

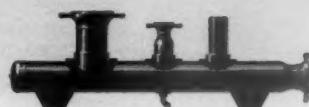
maximum return for



Manufacture of Heat Transfer Equipment
(Heat Exchanger Division)



Manufacture of Oil Heaters
(Oil Heater Division)



Shop Fabrication and
Installation of Pressure Piping
(Fabricated Piping Division)

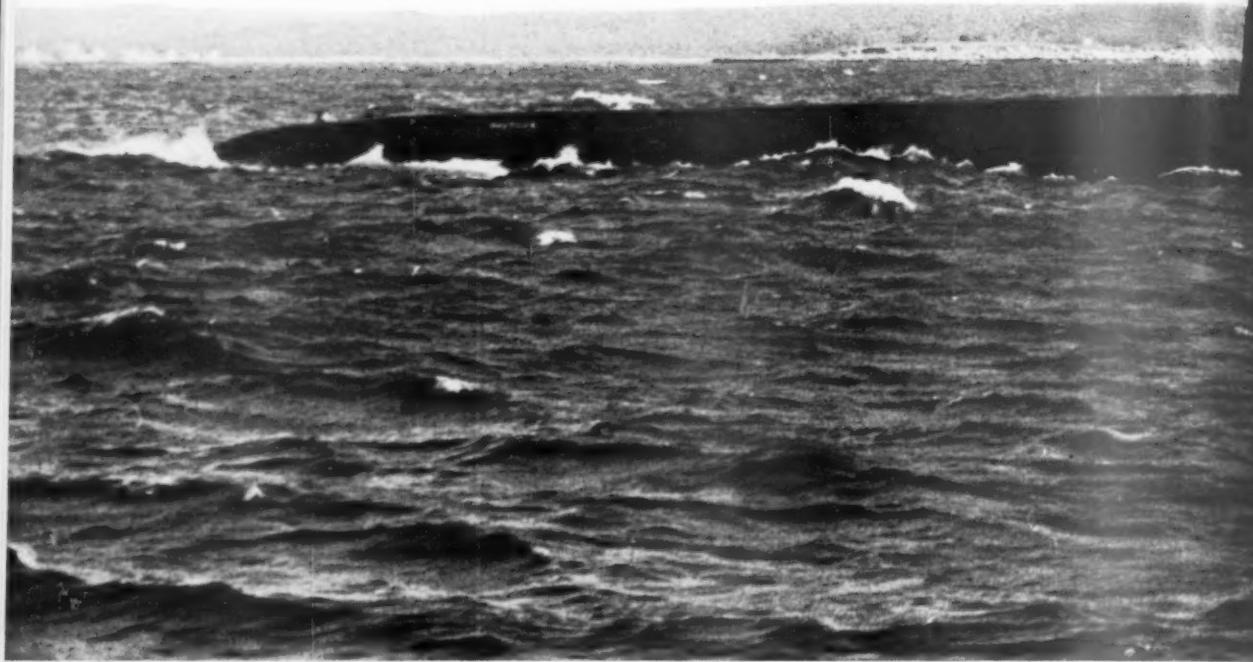
your capital investment!

In the past half century Lummus has designed, engineered and constructed over 700 major installations throughout the world. The excellent operating records of these plants indicate that the coordinated directing of a project from idea to startup is the best possible guarantee of a profitable investment. Our staff and facilities can complement your own — on your next project.

The Lummus Company, 385 Madison Ave., New York 17, N. Y. *Engineering and Sales Offices:* New York, Houston, Montreal, London, Bombay, Paris, The Hague. *Sales Offices:* Chicago, Caracas. *Heat Exchanger Plant:* Honesdale, Pa. *Fabricated Piping Plant:* East Chicago, Ind.

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DESIGNING ENGINEERS AND CONSTRUCTORS FOR THE PETROLEUM AND CHEMICAL INDUSTRIES



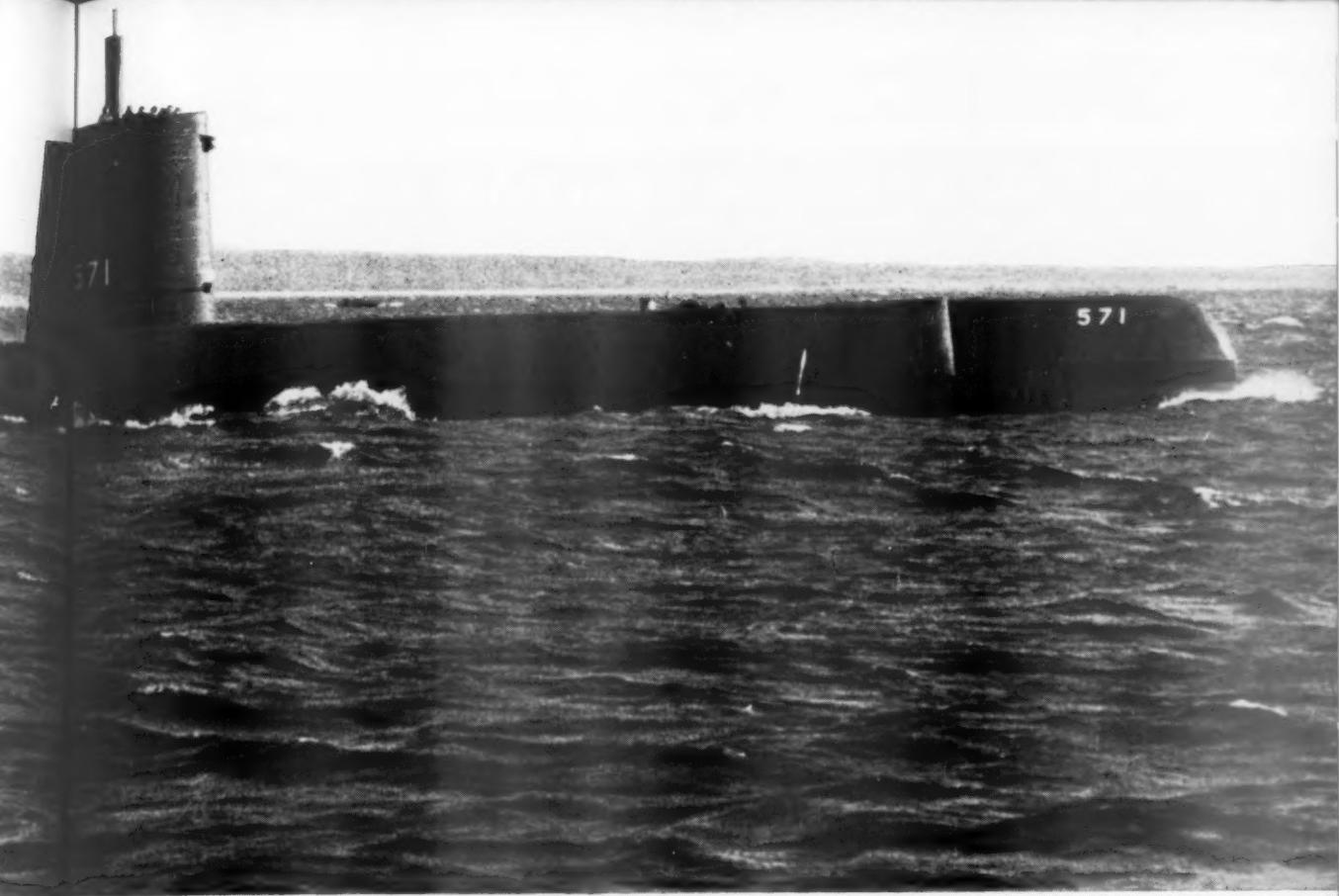
FIRST ATOM SUB

Atomic Engine Drives Revolution

The Nautilus, the U. S. Navy's first atomic submarine, has gone to sea. She is driven by an atomic engine—built by Westinghouse for the Government—that runs on uranium instead of conventional fuel. It will enable the Nautilus to cruise all the way around the world without refueling or even resurfacing, at speeds in excess of 20 knots while submerged. Such performance forecasts the great usefulness of

atomic power for peacetime uses—to drive ships, planes and electrical generating plants.

The United States now has two reactor plants successfully producing atomic power in substantial amounts. One is in the Nautilus. The other is at the National Reactor Testing Station, Idaho. **Both plants were built for the Government by Westinghouse.**



SUB GOES TO SEA

Innovative Submarine "Nautilus"

WESTINGHOUSE IN ATOMIC POWER

FIRST atomic engine to drive submarine went to sea January 17, 1955.

FIRST atomic reactor for full-scale peacetime electrical generating power plant in the U.S. is now being built for the Government by Westinghouse; to be operated by Duquesne Light Company, Pittsburgh, Pa.

FIRST contract to develop atomic engine

for large surface ship . . . October 15, 1954.

FIRST substantial quantities of controlled atomic power produced at the Government's National Reactor Testing Station, Idaho . . . May 31, 1953.

YOU CAN BE SURE.. IF IT'S
Westinghouse

PRODUCTION

Geared to big production, an integrated steel mill



A new combination of equipment... can cut

out several of the steps shown above. Starting with beneficiated ore, you can use an electric furnace (1), or an oxygen-type furnace (2), and a continuous casting machine (3).



The Limited Market Mill: Is It Still

The drawings above show two types of steel mill: (top) the huge integrated mill that produces most of the nation's steel and (bottom) a new combination of units that would make up a semi-integrated mill capable of serving a region or a narrow market without paying a penalty in the form of higher costs. To some interpreters, these two types represent the past and the future.

All the leading steelmakers today—25 of them account for around 90% of U.S. ingot capacity—operate integrated mills. U.S. Steel Corp. built the newest, the Fairless Works, at Morrisville, Pa. (BW-Jan. 23'54,p60). That may be

the last big integrated mill, if you could put complete faith in those seeing a full swing to the semi-integrated regional mills. However, millions are still being spent on the monster mills, with the owners confident their judgment will be proved right.

• **Definitions**—To the steelman, "integrated" means that the operation starts with the raw materials from earth—the iron ore, coke, and limestone—and makes first pig iron and then steel of various types such as strip, sheet, and structural shapes. The integrated mill turns out higher tonnages of steel ingots, sold to fabricators, and finished

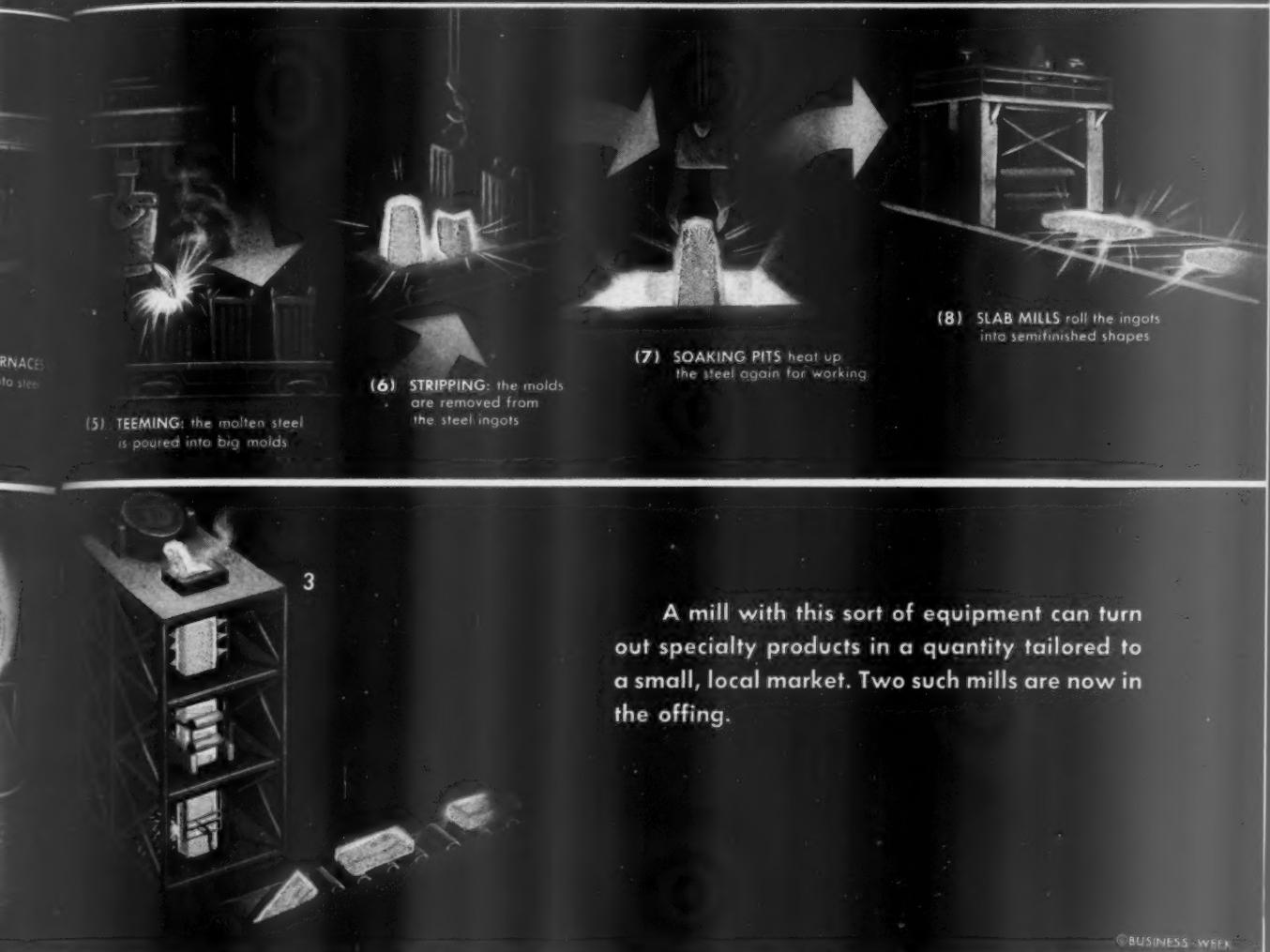
products, sold to broad and sometimes distant markets.

The tools of the integrated mill include coke ovens; blast furnaces for making iron; open hearth, electric, and Bessemer furnaces for making steel.

"Semi-integrated" usually means that the operation skips the pig iron step and starts with the steelmaking itself. There are now 79 semi-integrated steel companies in the U.S. They sell specialty items or fill the tonnage needs of a region.

• **Spurring Growth**—Some industrialists feel there is room for more semi-integrated mills, especially in areas such

rate/steel mill has many steps



3

A mill with this sort of equipment can turn out specialty products in a quantity tailored to a small, local market. Two such mills are now in the offing.

©BUSINESS WEEK

It's Steel's Best Bet?

as the Southwest, the Far West, and the Northwest, where steel consumption is ahead of local production. What makes the semi-integrated mill look more attractive than ever to investors is the development of a new team of processes:

- New equipment, such as the oxygen-type Brassert furnace and the continuous casting machine (lower drawing).

- A new feedstock for the electric furnaces that are standard equipment in semi-integrated mills today. This feed is an iron ore concentrate, in pellet form—the result of beneficiating low-

grade ore. With these concentrates, the semi-integrated operator can jump the gap from ore to steel without having to buy intermediate materials.

Rolling-mill equipment has also been designed lately in sizes—and at prices—that are attractive to the semi-integrated mill owner, old and new.

- Electric Furnace—Up to now, a standard unit in such mills has been the electric furnace, which takes a mix of pig iron and scrap steel and turns it into steel. Some of the scrap comes from the plant's own operations, but most materials are bought outside.

The electric furnace has about the

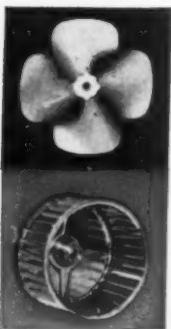
right capacity for a semi-integrated mill—up to 125 tons—and it costs originally only about 20% as much as the integrated mills must spend for a blast furnace, coke ovens, and open hearths (BW-Mar.29'52,p50).

- Oxygen-Type Furnace—The Brassert furnace is about to come into use to add to steelmaking capacity in semi-integrated mills. Its operation (BW-Mar.6'54,p52) has the simplicity and compactness of a Bessemer converter: A heat of pig iron or molten steel made from scrap is poured into a cylindrical furnace; a jet of oxygen at near sonic speed blasts over the surface of the heat, burning out the unwanted materials. The result is a steel that is comparable with open-hearth types.

Dominion Foundries & Steel, Ltd.,



No air-moving
appliance can be better
than the most vital
component: the air
impeller. And no one has
had more experience in
the design and manu-
facture of air impellers
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THE
TORRINGTON
MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT
VAN NUYS, CALIFORNIA • OAKVILLE, ONTARIO

"... regional markets will support their modest but modern plants . . ."

STEEL starts on p. 44

of Hamilton, Ont., expects to be the first North American producer to put Brassert furnaces to use. McLouth Steel Corp. of Detroit is also working on Brassert furnaces, under license from Kaiser Engineers, of Kaiser Motors, Inc.

• **Continuous Casting**—The key to using the electric and oxygen-jet furnaces most effectively may be the continuous casting machine. This takes the product of the other two furnaces (or of an open hearth furnace, if desired) and in one step turns molten steel into a cold semifinished shape, cut to convenient lengths—all at a fast speed.

Koppers Co., Inc., of Pittsburgh is engineering and building these machines. Atlas Steels, Ltd., of Welland, Ont., has one in operation, turning out stainless and specialty steels (BW-Nov. 6'54,p162).

For several years, continuous casting has also been jointly researched by Republic Steel Corp. and Babcock & Wilcox Co. at B&W's Beaver Falls (Pa.) plant. Both firms feel that the technique also has a place in big integrated mills, but primarily for specialty steels, such as tool and stainless. In a big mill, a casting machine could break a bottleneck in the rolling equipment that handled bread-and-butter products.

The semifinished steel from the casting machine can feed directly into the rolling mill from only a little heat-treating on the way.

• **Two New Mills**—Right now in Cleveland, two separate groups are planning semi-integrated mills that use the whole package of modern methods illustrated on pages 44 and 45.

One mill, slated for either California or Nevada, will have a monthly capacity of at least 15,000 tons of sheet products. The other will specialize in reinforcing bars for the construction industry around San Francisco. It will have a monthly output of 5,000 to 15,000 tons.

For competitive reasons, backers of these mills are secretive about their own identity and the exact location of their plants. According to industry talk, however, Leon A. Beeghly, a director of Youngstown Sheet & Tube Co., is backing one of the mills.

• **The Economics**—Promoters of these two mills have no delusions about rivaling any of the major integrated producers in either size or sales. But they feel their regional markets will support all-out operation of their modest but modern plants. Their costs, they say,

s will
but

p. 44

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This is Philadelphia



Typical of Greater Philadelphia's expanding chemical industry is this huge plant used for the manufacture of plastics.

Fifteen Greater Philadelphia chemical plants are now spending approximately \$163,000,000 to increase production... to market products today that were unheard of yesterday... to market products tomorrow that are undreamed of today.

In this rapidly growing 14-county Greater Philadelphia Market now live more than 4,500,000 home-owning, home-loving *family* folks. They are people with money to spend and the good judgment to spend it wisely. They'll buy your product again and again.

These are the people who read The Evening and Sunday Bulletin—the newspaper that reflects the character, needs and interests of the entire region. With one of the largest local news staffs in the nation, The Bulletin's complete and accurate reporting of the big and little news of Greater Philadelphia has made it a trusted member of the household through generations of Philadelphia families.

This is one of the many reasons why, in Greater Philadelphia*, The Bulletin delivers more copies to more people every seven days than any other newspaper.

The Bulletin is Philadelphia's favorite newspaper—Philadelphians *buy it, read it, believe it and respond to its advertising.*

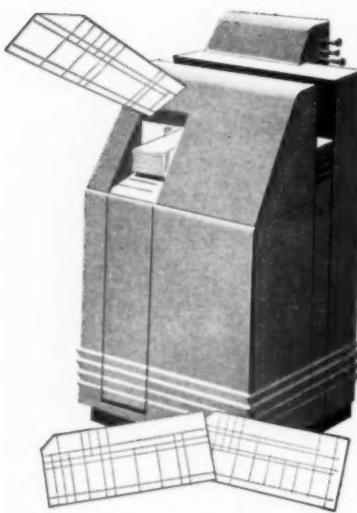
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INDUSTRY

won't be any higher than those of most producers in the East and Midwest. The initial tab for a semi-integrated mill with a monthly capacity of 15,000 tons of finished products is about \$15-million to \$17.5-million.

The cost breaks down this way for the equipment: the complete furnace shop, \$4.5-million; the continuous casting machine, \$4-million; hot and cold finishing mills, \$5.3-million; and accessory equipment, an additional \$2.5-million. These costs are preliminary engineering estimates. Chances are that the investment and carrying charges might be lower for each ton of finished steel, compared to that of an integrated mill.

The market demand has been worked out through surveys. In a growing steel-consuming area, the first needs are for reinforcing bars, small merchant bar stock, rod and wire products, tubular goods, and some flat-rolled stuff. The two Cleveland groups are engineering their mills for these needs.

Transportation is a factor, too, in their thinking. The cost of transporting steel from the historic centers of the industry to the growing markets of the West and Southwest has been steadily increasing. Location of mills in those markets will drastically cut that cost.

• **Concentrated Ore**—A second attraction for the new mills is the development of rich sources of iron concentrates from the taconite and jasper ores of the Lake Superior region. Besides being a new source of raw material for the electric furnaces, the existence of these concentrates will have a stabilizing effect on the up-and-down price of steel scrap, the traditional feed for the furnaces.

The concentrates, which come in pellets of 62% to 65% iron, aren't yet abundantly available, but as their output increases and cost goes down, they will someday be competitive with scrap at \$40 a ton. What's more, the Cleveland experts say, the iron pellets are superior to steel scrap as fodder for the electric furnace. The little scrap the furnaces will need for the initial melting operation can come from within the plant, rather than the outside market.

In electric furnace use, Republic Steel Corp. has bridged one last technical gap in the metallurgy of iron pellets. It has found a way of easily removing oxygen from the concentrate, which is necessary to prepare the pellets for feeding into the furnace.

At its powdered iron plant in Toledo, Republic does the job with hydrogen gas. In a vertical furnace, the iron pellets get a blast of heated hydrogen; oxygen from the heated pellets combines with the hydrogen and passes off in steam. The excess hydrogen is recirculated in the furnace.

PRODUCTION BRIEFS

An aluminum plant for the West is proposed by the Reynolds Metals Co. The new fabricating unit will be in the Pacific Northwest, probably at either Longview, Wash., or Troutdale, Ore., where the company already has aluminum reduction plants. Reynolds recently footed the bill for a \$500,000, Army-proposed flood control project at the Troutdale site, which is on the Columbia River.

Production of artillery shells will be resumed by Delta Tank Mfg. Co., Inc., a wholly-owned subsidiary of General Gas Corp., of Baton Rouge. Delta, a big Korean War shell producer, was put on standby at the end of its contract with Army Ordnance in early 1954. The Delta announcement says that the new contract is worth \$54-million.

Ford Motor Co. recently announced that it has assembled an experimental gas turbine engine. This makes it the third big auto company to go into this field. In 1954, both General Motors and Chrysler built and tested gas turbines for automobiles. Results were good power-wise, but exhaust heat gave trouble. Ford doesn't say whether its engine has been road tested.

Oak Ridge School of Reactor Technology is accepting enrollment applications for the 1955-1956 session. Industrial organizations may enroll a limited number of technical personnel in the AEC school where tuition for students from companies other than AEC operating contractors is \$2,500. Address: The Director, Oak Ridge School of Reactor Technology, Post Office Box P, Oak Ridge, Tenn.

Flight queries answered immediately: American Airlines uses an electronic memory unit to record and update information about flight condition, time of arrival, and departure of all flights to and from its New York-Newark bases. The unit, which also keeps track of all reservations, makes it possible for flight agents to answer questions immediately about in-flight aircraft, without going through Flight Dispatch.

New plant, new product: The Plastics and Resins Div. of American Cyanamid Co. will build two thermoplastics plants. One, in New Orleans, will process raw material for further use at the other, in Wallingford, Conn. The products, a molding compound and an intermediate, will be turned out by a reportedly new operation.

This book shows you how to get SPACE CONTROL



Write for this new 68-page catalog. It's a practical work book on Space Control



• Mills Walls give you *Space Control*, the ability to adapt your space readily to changing space requirements. They *promote efficiency*—enable you to get maximum productivity through the most effective use of space. Mills Walls are *economical, too*—can be moved at low cost, overnight or over a week end, without interrupting normal routine—require no maintenance except occasional washing. Thoroughly sound-proofed, Mills Walls combine distinctive architectural design with structural stability—are as attractive and modern as they are efficient.

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Stack 'em up!

...and save storage space

Here's the lightweight, stainless steel acid container that builds a safe, compact stack—saves warehouse space and handling time for you. Bottom foot ring of the 15½-gallon Hackney Chemical Container fits snugly over top ring of lower barrel.

Designed with easy-to-grasp, full curled foot rings for safe, one-man handling and convenient pouring. Your name can be embossed on the bottom foot ring. Low tare weight reduces transportation costs. Stainless Steel protects your dangerous or perishable chemical products—eliminates breakage losses.

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DOWNTOWN IRON WORKS, INC., DIVISION

137 Wallace Ave., Downingtown, Pennsylvania

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

NEW PRODUCTS

Power Trouble Shooter

On cold, stormy nights, when roads are slippery and visibility is poor, a driver makes heavy demands on his car's electrical system. His headlights are on, and probably his heater and radio. At low speeds, his generator may be running too slowly to keep everything going at once. In fact, many truck drivers complain that on bad nights they often have a choice between using their headlights or their windshield wipers.

Leece-Neville Co. will soon market an alternating current generator that, the company claims, will keep everything running smoothly under the worst weather conditions, and which is inexpensive enough for general installation.

Beginning in February, Ford Motor Co. will install this equipment in its new vehicles upon the customer's request. Up to now, all but emergency vehicles have used direct current generators, because alternators, though more powerful, cost a lot more. A d.c. unit, while it can be set to give maximum output at either high or low speeds, will not perform well at both. For example, if it's set to give maximum power at 30 mph., it may be practically useless at 15 mph. This throws the whole load on the battery—which can carry it only so long. An a.c. generator, on the other hand, can deliver almost a third more power than can the comparable d.c. unit. Even at low speeds, its output can take care of all demands.

Leece-Neville says it has made its alternator a near mass-production item by building an automatic coil winder, punching out parts that were formerly cast, and cutting down machining operations. The new unit—which contains the generator, a rectifier, and voltage regulator—will cost around \$150.

• Source: Leece-Neville Co., 5109 Hamilton Ave., Cleveland.

Mobile Air Conditioner

A mobile air conditioner made by Emerson Radio & Phonograph Corp. can be wheeled from window to window to provide cooling when and where it's wanted.

The unit is mounted on a movable wrought iron stand that can be raised or lowered to fit flush against the bottom of a window. Any open parts of the window that aren't covered by the unit can be masked with an installation kit that comes with the conditioner. This makes it possible to adapt the unit to windows of differing sizes.

Emerson says that the changeover

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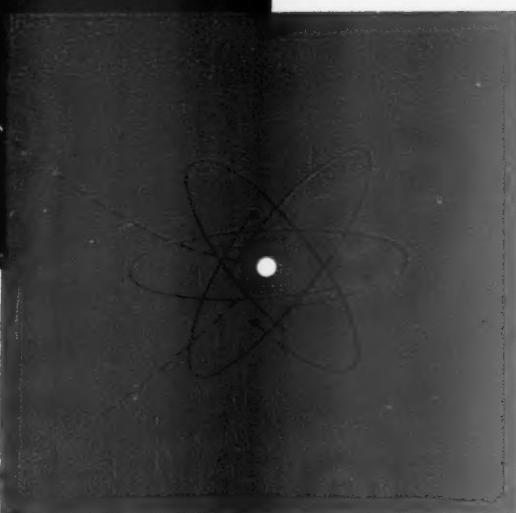
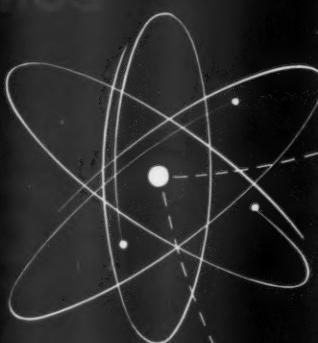
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Through miniaturization, Crosley is solving problems of weight and size reduction of vital military equipments and systems—increasing performance and reliability.

Typically, Crosley's modified Glide Slope-Localizer Receiver—now 40% lighter and 24% smaller—requires less power, provides greater flexibility, easier installation and maintenance.

And Crosley's advanced techniques in miniaturization find equal application wherever weight and size must be held to a minimum.

Why not let Crosley *reliability* do the job right for you?

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MANUFACTURING
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EVERY PLANT LOCATION SHOULD HAVE ALL **7*** FOR EFFICIENT OPERATION



How far must you go for the supplies that keep your production lines rolling? Distance can mean delays—and dollars out of your pocket. Stockpiling can be expensive, too. The ideal situation for any manufacturer is to be able to buy everything he needs—as he needs it—"right in his own backyard."

Producers of a great variety of equipment, component parts, special steels, coal and petrochemicals, and semi-finished materials and supplies of all kinds, are located in the area served by the West Penn Electric system in the five states of Maryland, Pennsylvania, West Virginia, Ohio and Virginia. That's one reason why you should consider this area when it's important to cut costs. You won't have to "shop around" for the materials you need.

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from one window to another requires no skill, and takes very little time. Smaller model, $\frac{1}{2}$ hp., costs \$189.95; the largest, $\frac{1}{2}$ hp., sells for \$329.95.

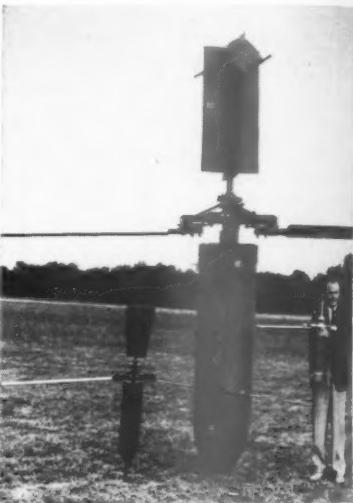
• Source: Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York 11.

NEW PRODUCTS BRIEFS

A nail-less crate can be assembled or taken apart in one minute. The shipping container, made by Evans Container Corp., 5832 E. 61st St., Los Angeles, is held together by simple patented bracing devices, without nails, screws, or hooks, and is reported to be completely reusable.

Tough wire rope is being turned out by American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn. It is made from high carbon steel and is said to be 15% stronger than the best ropes made so far. The rope has been tested in heavy construction, mining, logging, and petroleum installations, and the Navy is already using it in catapult launching assemblies, arresting gears, and barriers.

Multipurpose drafting aids are made by Graphic Calculator Co., 633 Plymouth Court, Chicago 5. Clear sheet plastic instruments include a straight-edge attached to a quadrant with a retractable pivot at the quadrant's center.



Supplies With a Spin

By combining a helicopter-like rotor with a standard M-2 military supply container, engineers of the Kaman Aircraft Corp. have built a unit that can be dropped from a low-flying plane with pinpoint accuracy. Rotor action slows the descent, protects contents.

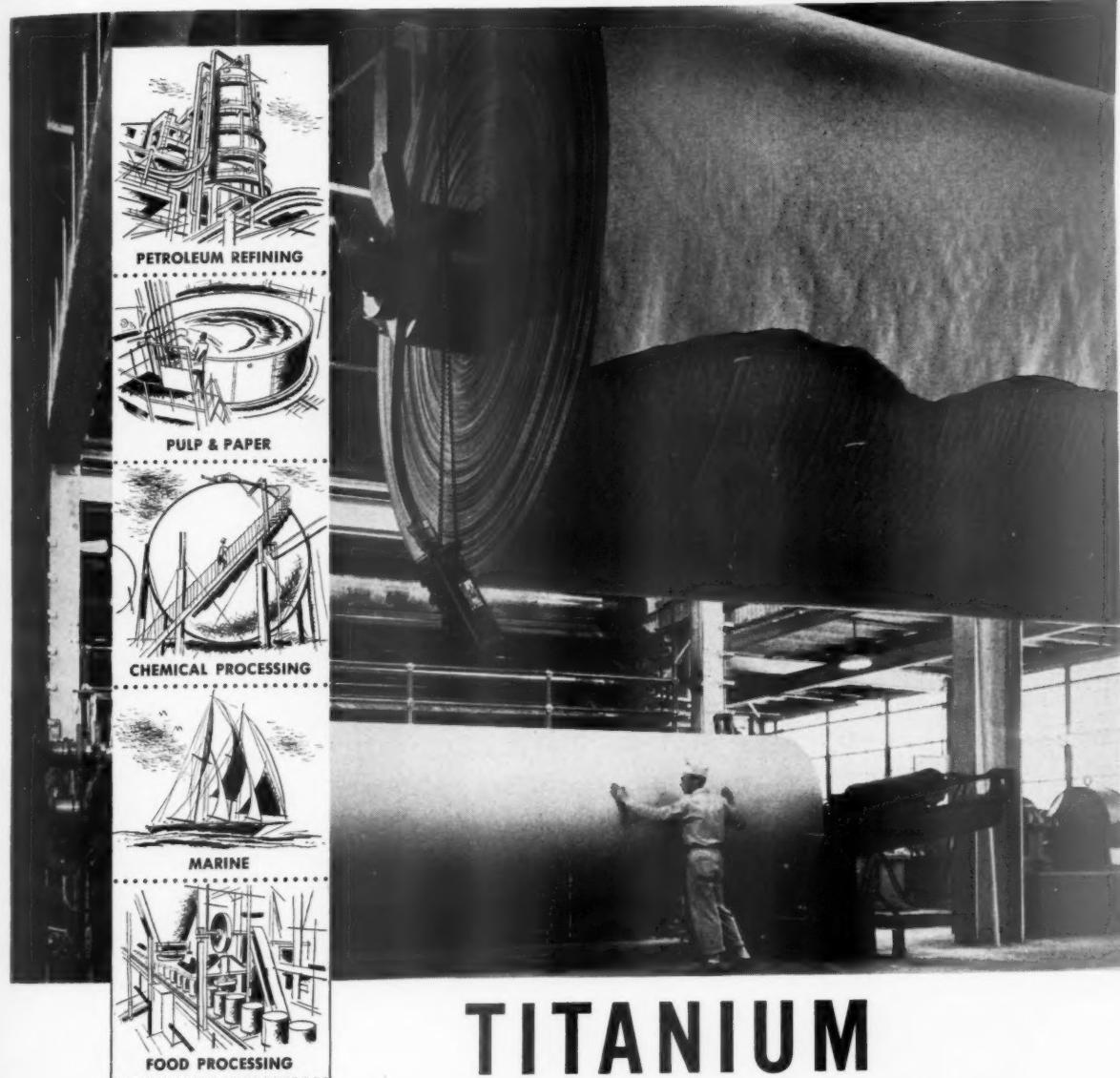
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TITANIUM

is it your key to progress, too?

Want a metal to *really* answer your corrosion problems? One that's strong as steel but *40% lighter*? One you can fabricate by normal shop practices? Then REM-CRU titanium is what you're looking for.

Titanium is the key to progress for many manufacturers. In *hundreds of applications* nothing else will do the job as well. Pulp and paper making, for example, can profitably use REM-CRU titanium for valves and fittings, tubing, screens, chemical recovery equipment—anywhere corrosion or erosion is a critical problem. Chlorine-dioxide bleaching becomes practical when REM-

CRU titanium is used. Better paper and lower costs result.

Now you, too, can take advantage of titanium's unique properties, for expanded facilities at REM-CRU make ample quantities available for nondefense use. You'll get *prompt* delivery of REM-CRU titanium bars, plates, sheet, strip, wire, tubing and forgings . . . in many sizes and grades . . . even in new high-strength, weldable alloys. And since there's a *best* way to work with titanium—as there is for any metal—why not take advantage of the practical advice a REM-CRU engineer can give you?

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REM-CRU TITANIUM, INC., MIDLAND, PENNSYLVANIA

a CMP cost cutting report ON THIS SPRING STEEL PART

CMP COLD ROLLED
TEMPERED SPRING STEEL

made it easier at less cost



BEFORE

This manufacturer of spring steel parts purchased annealed spring steel and processed it for desired temper preceding fabrication. Frequently problems of non-uniformity slowed down production. Often-times parts did not meet specifications--tolerances were too variable--fatigue tests would not meet requirements. It all added up to many costly rejects.



AFTER

These problems were given to a CMP representative for study and, after several discussions with CMP technical representatives, a new manufacturing procedure was established. Specific specifications were developed by CMP for each spring steel application and, after approval by the Customer, CMP then produced and processed tempered spring steel to each such specific specification. The manufacturer's previous problems of fabrication and tempering-in-process were eliminated and the manufacturer showed an improved cost on each such spring steel job, proving once again that it is worthwhile to utilize the CMP technical spring steel experience which is available to you at any time.



CMP Products—low carbon, electro zinc coated, high carbon, tempered spring steel, stainless and alloy.

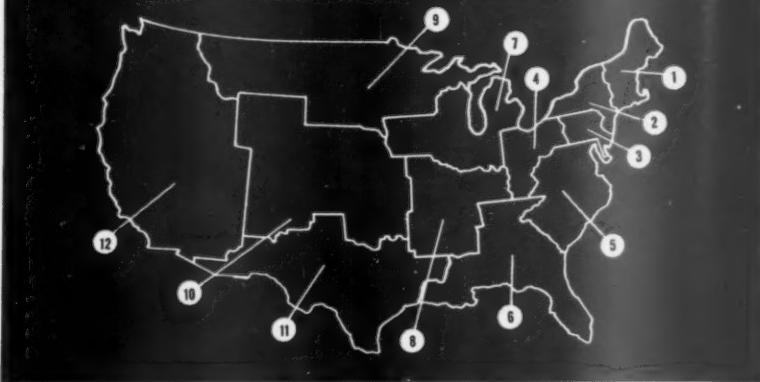
the Cold Metal Products co.

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REGIONS

The Income Pattern:
Business Week's Regional Income Indexes

U.S. Incomes Down 0.3%



Federal Reserve District	% change vs. year ago	The Indexes		
		Nov. 1954	Oct. 1954	Nov. 1953
1. Boston	-0.3%	259.2	257.7	260.0
2. New York	-2.0%	272.6	274.0	278.2
3. Philadelphia	-3.7%	260.8	261.4	270.9
4. Cleveland	-3.4%	293.7	289.5	303.9
5. Richmond	+2.8%	320.2	312.3	311.6
6. Atlanta	+3.9%	376.0	376.5	362.0
7. Chicago	-1.8%	304.5	302.6	310.2
8. St. Louis	-0.6%	293.5	293.2	295.2
9. Minneapolis	-0.7%	311.7	313.3	313.9
10. Kansas City	+3.1%	369.3	368.8	358.2
11. Dallas	+2.4%	414.0	412.1	404.4
12. San Francisco	+1.8%	338.0	338.9	331.9
U.S. Composite	-0.3%	307.5	306.5	308.4

1941 = 100; adjusted for seasonal. November figures preliminary;
October revised.

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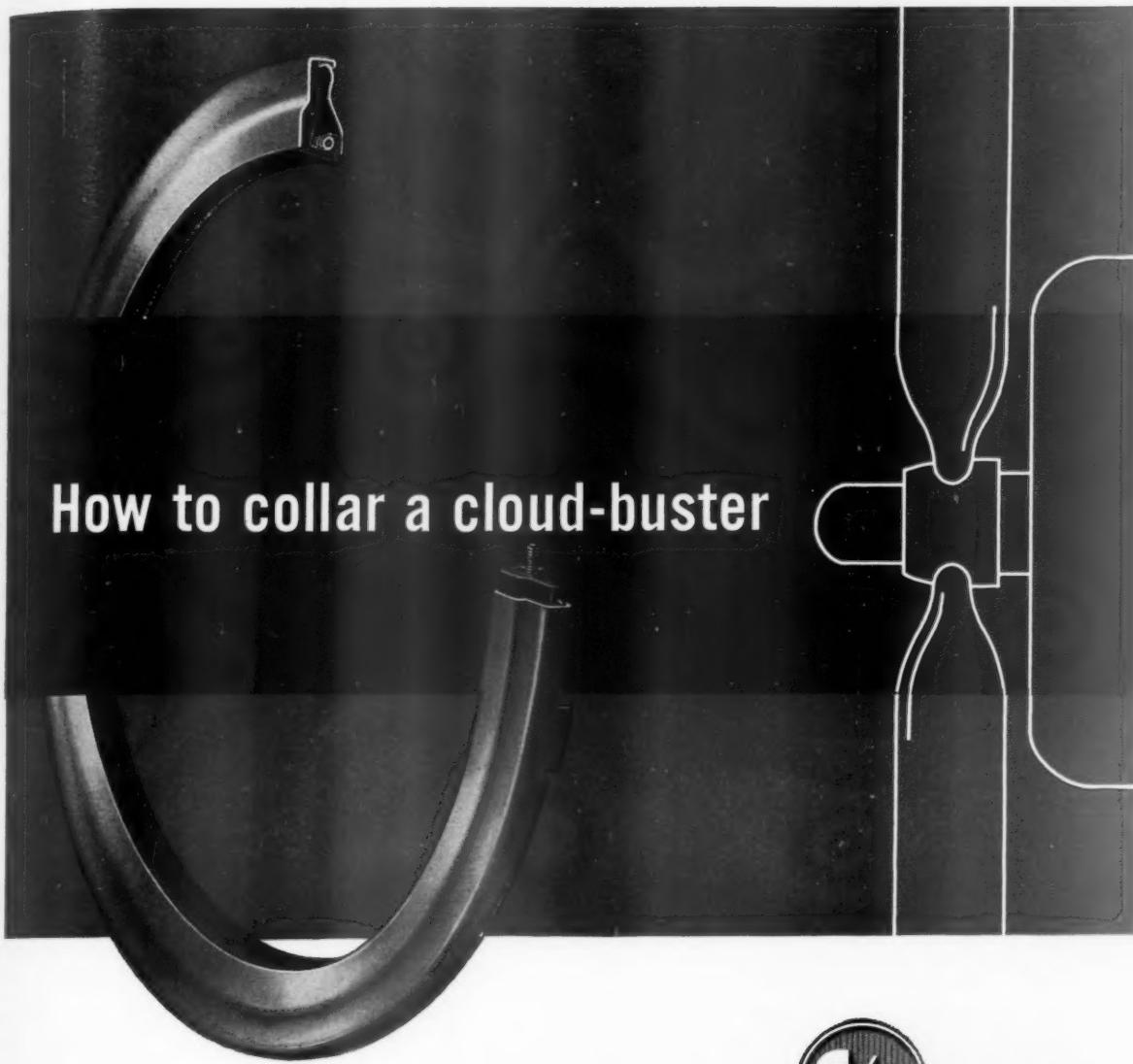
New High for Year

Last November, total U.S. income reached its highest level for 1954, even though it was still 0.3% below the level of the previous November—and 0.8% below the all-time high in July, 1953, according to BUSINESS WEEK's Regional Income Indexes.

Only in the West and South did the individual regions show year-to-year gains for November. These same regions, plus the Boston region, were the only ones that showed a gain in incomes since the beginning of the year. As in earlier regional income reports, the greatest declines from year to year

are still in the Philadelphia and Cleveland regions.

From last October to November, incomes increased 0.3% over-all. Seven regions had higher income in November than in October. The regions that did suffer declines lost no more than 0.5% in any case, and increases ranged as high as 2.5%. Employment gains in many areas got credit for improvements in income during November. The auto plants called many men back to work on new models, and employment also increased in steel, metal products, and electrical machinery.



How to collar a cloud-buster

AND BRING COSTS DOWN TO EARTH!

Where the propeller shaft enters the gear case, the design specs called for a piston ring seal. It was dependable . . . but through cooperative efforts of Curtiss Wright and C/R engineers, a simpler seal was designed, equally as dependable but saving space and cost. It works perfectly. This C/R seal provides lubricant retention sufficient to seal a vital bearing under severe conditions. This is a typical example of C/R seal engineering service. May we help you, too, with your sealing problems? Send for your copy of "C/R Perfect Oil Seals."



*More automobiles, farm equipment and industrial machines
rely on C/R Oil Seals than on any similar sealing device.*

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**new act on the
high wire**

When power line inspection got off the ground and into the air with Bell helicopters, costs and power line failures dropped to an all-time low.

Utility companies in the United States, Canada and France average from 25 to 50 miles of power line inspection *per hour* compared to 10 miles *per day* on foot. This means savings of 50 per cent and more in the cost of patrolling high tension lines.

You can profit by the world-wide experience of hundreds of companies in all industries who own or lease Bell helicopters. Our experts will be glad to help analyze your problems and demonstrate the economy and flexibility of the world's leading commercial helicopter.

There's a bonus in every Bell helicopter, too. In addition to power line patrol, these versatile aircraft are also used for topographical surveys ... carrying lead lines across inaccessible places... for emergency movement of crews and supplies... and for executive transportation.

Backed by more than a million flight hours, the Bell helicopter has a low initial cost, the *lowest* maintenance upkeep of any helicopter and is unequalled as a multi-purpose machine. It can operate in any climate, over any terrain, in any weather.

Complete details, including the sales representatives and commercial operators in your area, are available on request.

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Water Shortage...

. . . in areas feeding Missouri Basin threatens the river's transportation and power facilities.

Last week, the first of the Commerce Dept.'s 1955 water supply forecasts confirmed what residents of the Missouri Basin have suspected all along: There may be a water—and power—pinch on the Missouri River next summer.

Winter snow, which in large measure supplies next summer's water, has rarely been lighter in the basin area. The Commerce Dept. reported that total snow and water piled up behind Montana's Ft. Peck Dam was only 60% of normal; over the Yellowstone Basin, September through December precipitation was 55% of what it should be. Unless January to June proves a lot wetter than average, the river isn't going to have anywhere near the water that's needed.

• **Ramifications**—For years, the level of the Missouri—aside from floods—was of no particular importance. But with the revival of river commerce and the use of its water for power, all that changed. The area's new \$333.6-million river improvement project anticipates the day when the Missouri will be hauling more than 1-million tons annually (BW-Oct. 16 '54, p96). Now, just as the river begins to look forward to a new era of navigation, trouble looms.

Transportation, however, wouldn't be the only casualty. A lower water year now can mean:

- Ft. Peck's generators won't be able to take on any more than the firm power demands and the more urgent secondary loads that they are handling now. The same will be true for Ft. Randall's generators.

- The No. 1 generator at Garrison Dam—an 80,000-kw. unit slated to go into operation in March—would have to remain idle until there is enough water to turn it.

- The Mar. 15-to-Nov. 15 navigation season might have to be cut again; in 1954's dry year, two weeks were lopped off at either end. Barge operators, who look for freight of 500,000 tons this year (against 283,000 in 1954), have been pressing Army engineers for a full season. A cut would mean a loss of from 30,000 to 60,000 tons.

At this point, Army engineers say only that it's too early to tell exactly what the water supply will be. The 1955 operating plan for the river figures on a slightly below-average runoff. If by April, the runoff looks no better than it does now, plants will have to be reshaped to pare use to meet water.



ARA-RESIN

the new envelope adhesive
that is three ways different and many ways an improvement

The envelopes your firm sends out are more than wrappers — for correspondence, printed matter, samples, etc. Each envelope is your representative to a particular customer, sometimes the only representative he sees for months at a time.

Because envelopes hold this double importance, there is a never-ending search to improve them. That is why Ara-resin, Arabol's new Synthetic Resin Adhesive for envelopes, should be enthusiastically accepted — by envelope makers and envelope users alike.

An envelope with Ara-resin is, in our opinion, three ways better. (1) You have no bulging or seal impression to distort printing — to damage dies. Ara-resin makes a flatter, neater seal.

(2) With Ara-resin, there is less spoilage when envelopes are stored for any length of time — less tendency for the paper to curl. This is especially important to firms who process their mail through automatic postage machines.

(3) Ara-resin has more power to stick than dextrine type adhesives — and remains stuck. It actually out-performs the conventional envelope adhesives—even those made especially for "difficult" stocks like 100% rag and kraft. More than that, Ara-resin tacks and adheres only when brought in direct contact with water — it is less affected by high humidity.

Ara-resin is colorless (almost to invisibility), and odorless. However, Ara-resin can also be produced to your order, in a wide range of color, and to taste, if necessary, as well as to a degree of gloss. With any combination of these qualities, Ara-resin retains its basic characteristics.

By the pound, Ara-resin costs more than Arabol's Dextrine adhesives for envelopes. However, tests indicate that a pound of Ara-resin goes appreciably further than do conventional envelope adhesives. If this works out in terms of your requirements, then once again, it is a case where the best adhesive should have the least overall cost.

The Envelope Industry is one of a hundred in which Arabol is privileged to serve the leaders. We urge you to talk with your envelope supplier on the practical advantages, the added refinements and, quite possibly, the greater economy of having your envelopes made with Ara-resin.

For any of your other adhesive requirements — in the making, labeling, packaging, or shipping of your product . . . we invite the opportunity to submit samples for you to test in your own plant — under your particular working conditions — for your specific requirements, whatever their nature. That is the one kind of testing that assures you of satisfactory results. Your inquiry to Department 23 will bring a prompt response.

ADHESIVES ? ARABOL ! ★

70

YEARS OF PIONEERING IN
THE MAKING OF ADHESIVES



ARABOL

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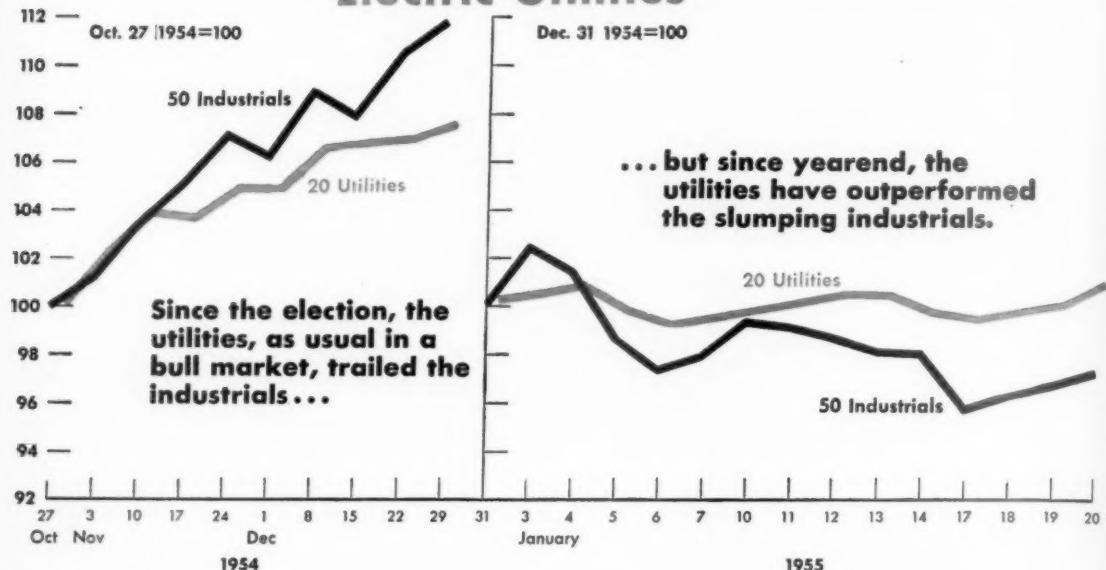
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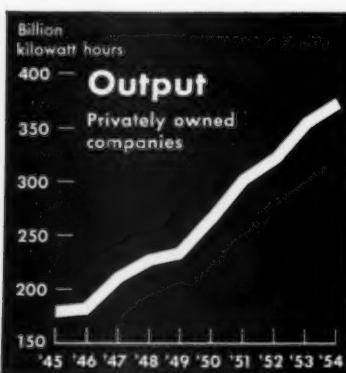
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FINANCE

Electric Utilities



With the market showing signs of weakness, investors are looking at the indexes (below) of the strength of the traditionally "defensive" utility stocks.



©BUSINESS WEEK

They Thrive on Adversity

When the stock market begins to act skittish, as it has recently, some investors start thinking about hedging their investments against possible trouble. This invariably leads them to eye the "defensive stocks"—tobaccos, food producers, bank stocks, and, especially, electric utilities.

Tobacco stocks have lost a lot of their luster due to the heavy cancer

propaganda, and the bank stocks haven't gotten much of a play recently. But there are signs that the utilities are attracting some attention.

The chart above shows that the utility index acted better than the industrials through the first three weeks of trading in 1955. In fact, just last week, Standard & Poor's average of 20 utility stocks hit its highest mark since

1930, when the era of pyramided holding companies was nearing its end. So far this year, the average daily trading volume of the utilities is higher than it has been in more than two years.

- **Defensive Value**—The utilities have a long-standing reputation for performing better than industrials or rails when the market is heading downward. This reputation isn't as ironclad as some



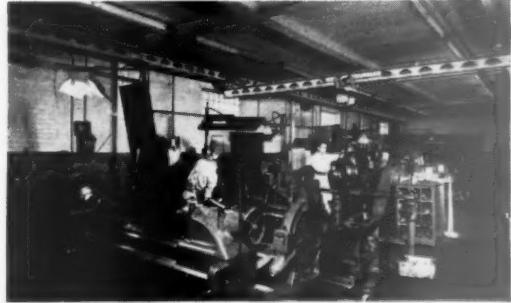
At Verson, a Whiting Trambeam double-girder crane is used to lift a set of gears (weighing 5 tons each) from the cutting machine.

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people believe—in the 1937-38 and 1946 market breaks, utilities dropped about as fast as industrials.

In 1953, however, the axiom worked.

In the first nine months of 1953, the industrials were down 16% but the utilities lost only 6%. Most bearish investors are looking for 1955 to be

more like 1953 or 1952, when utilities also outperformed industrials, than like the earlier shakeouts.

- **Earnings**—Of course, it isn't only market performance that marks utilities as a top investment in a business slide. Earnings of utility companies invariably do better than business generally—this was true in 1937 and 1949. In the latter setback, the Federal Reserve index of industrial production lost some 8.3% while electric utilities' earnings rose 16% on the year.

One big reason for this sort of showing is that recessions cut most sharply into industrial demand for power, and industrial sales give the utilities their lowest profit. Biggest margins come from commercial and residential consumers.

Another reason is that rates are regulated by state and federal agencies, thus are slow to move either up or down. In a deflation, therefore, rates will stick while other prices are dropping, giving utilities a relatively better showing.

Of course, in an inflationary period, rates won't rise so fast, but utilities have done fairly well in boosting revenues and earnings during the post-war inflation. The regulating bodies have helped. Since 1946, they have granted 386 of a total 431 applications for rate increases.

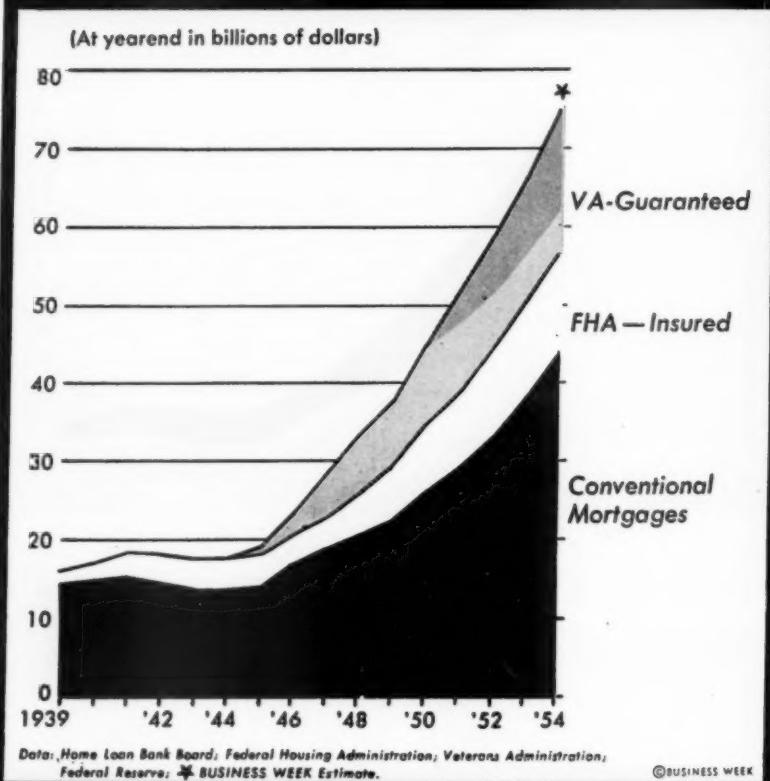
- **Cause for Alarm**—The terrific height of the present market is another thing worrying investors, especially the inherently cautious. Yields on many industrial stocks are no longer considered attractive, and the market has attained a volatility that keeps market observers tossing in their sleep.

Among the "pro" investors—the investment trusts—there's some difference of opinion about utilities right now. One trust figures that it ought to start buying a "slug of utilities" in six to nine months. From 1951 to the beginning of last year, utilities were the largest holdings of this trust, but last year they were cut back sharply in order to shift more money into the fast-climbing industrials. Now the fund figures the pendulum has swung the other way—utilities look better on price and offer better yields than the industrials.

- **The Other Side**—Another large investment trust takes just the opposite view. It, too, reduced its holdings of utilities in early 1954—from 14% to 8% of its portfolio. And it's quick to point out that some funds that held large chunks of utilities through 1954 have shown up poorest in investment trust performance for the year. This fund doesn't look for any serious trouble this year. As for defensive holdings, it says, "If you want to be defensive, don't buy common stocks."

- **Year's Record**—No matter which side

Mortgage Debt Outstanding on Nonfarm 1- to 4-Family Homes



Debt Booms Along With Housing

The U.S. is in the midst of the biggest housing boom in history—and the biggest mortgage debt boom. Last year, more than 1.2-million houses were built. Year-end mortgage debt was an estimated \$75-billion, up \$9-billion, or 14%, over 1953. Since the war 9.4-million houses have been built, more than in the previous 22 years.

Most observers see no abatement of the boom in 1955. The National Assn. of Home Builders, perhaps more bullish than most, looks for 1.3-million starts this year (BW-Jan.22'55,p26), which would eclipse the record set in 1950. The boom will probably get its greatest stimulus this year from the Housing Act of 1954, which provided more liberal terms on government-insured mortgages, which now make up about 40% of all mortgages written.

The giddy rise in housing starts and in debt can have its dangers, and many

prophets are sounding warnings. Dr. George Conklin, financial vice-president of Guardian Life Insurance Co., pointed out that 1.3-million new starts this year would require around \$26-billion of new mortgage money, and conditions in the money market are quite different from a year ago. Then business activity and inventories were declining, credit was plentiful, and the commercial banks had money, due to the slack in business loans, to buy government bonds from life insurance companies and savings banks. This in turn allowed those institutions to shift money into the mortgage market.

Now, Conklin points out, the demand for money is growing much faster than the supply, mainly personal savings. These factors make Conklin look for "a slight tightening of money and interest rates and a little less money for mortgages" (BW-Jan.22'55,p60).

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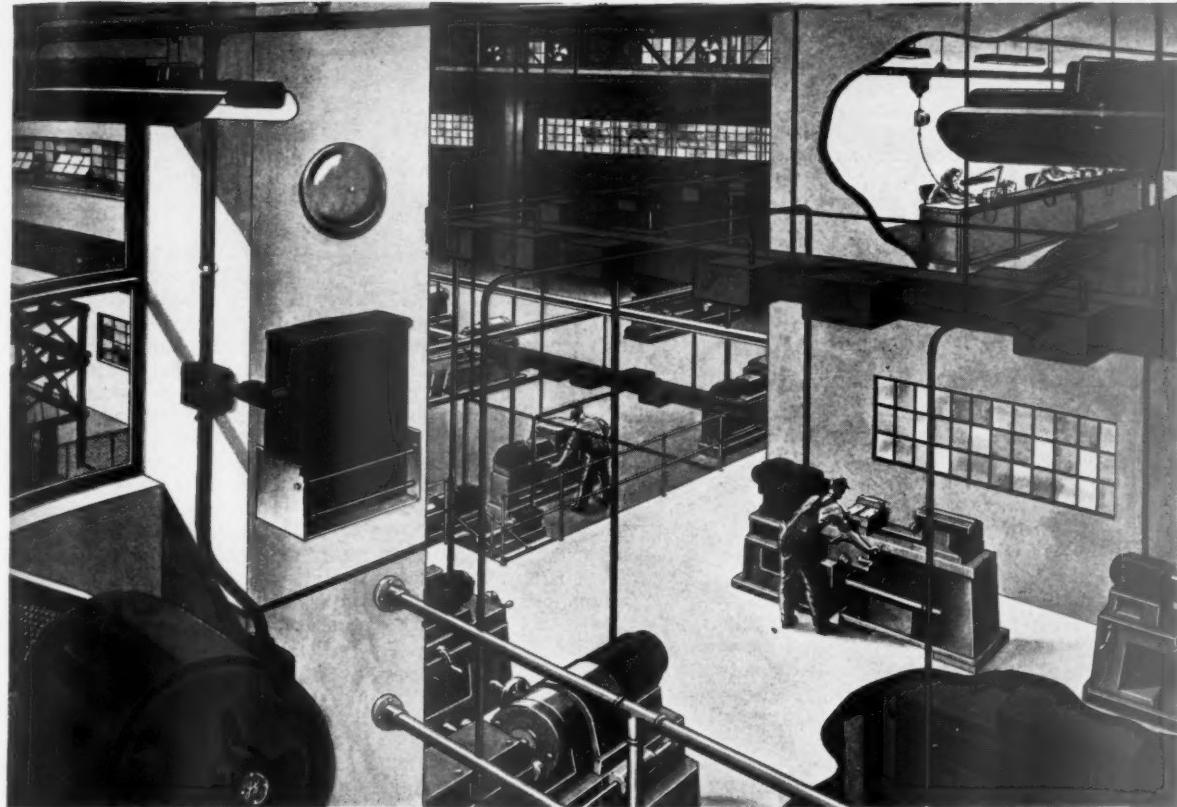
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of the fence you're on, there's no denying that electric utilities showed some fancy figures in 1954. There were new industry records for revenues, output, and new generating capacity added. However, none of this is particularly out of the ordinary—every postwar year so far has brought new records for these and other measures, and 1954 merely maintained the pace.

Here's the way 1954 looked for the private electric utilities:

Output. Total sales hit 409.5-billion kwh. last year, up 6.6% from 1953. Biggest jump came in residential use, which shot up 11.4%. Industrial sales, hurt most by the recession, were up only 3.9%, but still represent about 48% of the power companies' business. Commercial sales were up 8.1.

Revenues. The private companies grossed \$6.3-billion in 1954. That was 6.1% better than 1953 and more than twice the 1946 mark.

Net income. Percentagewise, net income increased nearly twice as much as revenues last year, racking up an 11.9% gain on a dollar rise of \$1.2-billion. The good showing last year came from the jump in relatively high-profit residential and commercial demand.

• **Costs**—Wages and salaries totaled \$1.2-billion in 1954, an increase of 6.2% over the previous year. Taxes were \$1.4-billion, up 8% over 1953. The only cost that turned down last year was fuel, which decreased a slim 1.9% from 1953. But this is still a fairly significant drop, as fuel costs are nearly 18% of total costs.

The drop in fuel cost is directly attributable to some striking gains in operating efficiency in 1954. Coal consumption per kilowatt-hour was reduced from 1.06 lb. per kwh. in 1953 to 0.99 lb. per kwh. Ten years ago, the figure was 1.29 per kwh.

• **Expansion**—Investor-owned companies added 8.1-million kw. of new generating capacity last year, making an industry total (including government agencies and cooperatives) of 107-million kw. of total installed capacity at yearend. This expansion cost the private companies \$2.8-billion; in 1953 they spent \$2.88-billion. About \$1.8-billion was financed through sale of securities, the rest from depreciation reserves and retained earnings. Of the securities, \$1.2-billion was in the form of debt issues.

This year, the industry figures to add another 13-million kw. of capacity, of which 8-million kw. will be supplied by private companies. Estimates of demand for electricity 10 years from now indicate that the industry will have to add 7-million to 12-million kw. a year. After these 10 years, as much as 11-million to 24-million kw. more per year may be necessary just to keep up with population growth.

First Shots Over New Haven

The skirmishing begins as McGinnis and Dumaine forces look ahead to the April annual meeting. Five Dumaine directors resign—with parting blasts.

Skirmishing has already broken out in the battle for stockholders' votes in April at the New Haven RR's annual meeting. Five directors who backed ex-Pres. Frederic C. Dumaine, Jr., have resigned from the board with hot blasts at the fiscal policies of Pres. Patrick B. McGinnis, who took control of the road last April.

The resignation of five pro-Dumaine directors raises McGinnis' voting advantage on the board from 11-10 to 11-5, one of the minority being Dumaine. Stockholders are getting two versions of the resignations: (1) from the Dumaine group, the directors are getting out because they don't like the way the railroad is being run; (2) from McGinnis, Dumaine and his friends have given up hope of regaining control of the road.

• **Evidence**—The books show that Dumaine has disposed of at least 114,000 preferred and common shares in the past few months. This is more than 11% of outstanding voting stock. This still leaves Dumaine the largest stockholder, and Wall Street sees no indication that he is giving up the idea of putting up a fight in April.

McGinnis concedes that, under the New Haven's cumulative voting rule, Dumaine can retain three seats on the board in April, maybe even four. But he questions if Dumaine even wants to head the road again. "If he does," says McGinnis, "why does he keep on selling New Haven stock?"

• **Charges**—The five Dumaine directors who resigned are: Morgan B. Brainard, president, Aetna Life Insurance Co., Hartford; Charles E. Dunlap, president, Berwind-White Coal Mining Co., New York; William M. Hickey, president, United Corp., New Rochelle, N. Y.; Richard E. Pritchard, chairman, Stanley Works, New Britain, Conn.; J. Francis Smith, president, J. F. Smith & Co., Inc., Waterbury, Conn.

Hickey and Smith joined Dumaine in charges that McGinnis has:

• Cut maintenance of the road to the danger point.

• Improved the earnings picture only by "bookkeeping adjustments."

• Raised "a few million dollars for a short term at an exorbitant rate."

• Allowed holdings of cash and government bonds to drop "from \$21-million to \$14-million."

• Held "rump" meetings of directors to which Dumaine supporters weren't invited.

• **Replies**—McGinnis had an answer for each of these charges:

• There was plenty of room to cut maintenance budget after the heavy spending of the Dumaine regime. Moreover, each cut had the O.K. of George T. Carmichael, vice-president and secretary-treasurer, and Jeremiah J. O'Neill, comptroller.

"Carmichael has been with the road 46 years and Jerry O'Neill for 43, and I trust their judgment completely."

• The only bookkeeping adjustments were "of the type approved by the Interstate Commerce Commission." Quick amortization was extended from purchases of freight cars, as in the past, to apply to new passenger cars, as proved accounting procedure.

• McGinnis said the chief borrowing was \$2.5-million to buy Boston & Providence RR debentures from the estate of Dumaine's father, and he defended a sale-leaseback deal on 984 old box cars, in which critics say the road is paying more than 7% interest.

• As to cash and government bond holdings, McGinnis said the \$21-million cited by the Dumaine group included millions of dollars not properly in the cash account. Actually, he said, the account rose from \$11.2-million on Apr. 30 to \$15-million at yearend.

• He admits calling his own directors, some big stockholders, and other friends together for a "pregame dinner" the night before each directors' meeting, to discuss the following day's business. He says the custom was initiated by the elder Dumaine many years ago.

• **Future**—McGinnis doesn't see a New Haven-Boston & Maine merger as anything imminent. Both roads will have to be in good financial shape first, he says, and any merger proposal is at least two years away.

He insists, though, that he is on his way to putting the New Haven on a firm financial foundation. The road's debentures are now selling at more than \$800; McGinnis says they will be up to \$1,000 par before too long. He hopes by spring to improve the road's credit to the point where he can borrow \$50-million for a new signal system, new lightweight passenger cars, and other improvements to plant.

He expects gross revenues in 1955 to run about \$154-million, compared with \$150-million for 1954 and \$163-million for 1953, but net income will fall below the \$6-million reported for the past two



DeVilbiss semiautomatic spray equipment saves paint, gives better finishes to Royal thermic jugs, at Royal Manufacturing Company, Bowling Green, Ohio.



D. W. Bolton, president of Royal Manufacturing Company, inspects finishes applied by DeVilbiss semiautomatic spray equipment. Royal makes one- and two-gallon jugs.

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years. That's because the road has met competition by cutting some rates.

Nevertheless, McGinnis says he will recommend payment of a dividend on common stock, first since the road came out of reorganization in 1947. He favors a dividend in stock, so that cash may be retained for improvements.

FINANCE BRIEFS

Corporate dividends in 1954 hit \$9.2-billion, a rise of 8%, the Commerce Dept. reports. Yearend extras swelled the December total to \$200-million above the year before figure. A high level of business activity, less need for investment funds, the end of EPT, and a switch of payments from December, 1953, to January, 1954, were credited for the rise.

Alleghany Corp. stockholders will vote Feb. 8 on selling the company's 350,000-plus shares of Investors Diversified Services. The purpose: The Robert R. Young controlled holding company wants to stay under ICC jurisdiction rather than under SEC; the stock sale would leave Alleghany holding nothing but railroad securities. Control of IDS is expected to pass to a company headed by two sons of Clint W. Murchison, a key figure in Young's capture of the New York Central (BW-Jun.12'54,p27).

Not a dry eye in the house: Trading in onion futures on the Chicago Mercantile Exchange hit 2,715 contracts one day last week, a new record for the exchange. The heavy trade in onions also carried trade in all commodities on the exchange to a record.

Interest rates rise: General Electric Credit Corp., which handles installment purchases of GE appliances, hiked its rate $\frac{1}{4}$ of 1%, to 1 $\frac{1}{8}\%$ -1 $\frac{1}{4}\%$ for three-to-nine month maturities. GECC thus follows the earlier rise in commercial paper rates (BW-Jan.22'55,p60).

Investor resistance is still a potent factor in the tightening bond market. Last week the syndicate marketing \$50-million worth of new 50-year 3 $\frac{1}{8}\%$ Commonwealth Edison Co. bonds was disbanded when very few takers wanted the bonds at par. In the free market, the bonds were quoted at 98 bid.

Baltimore & Ohio RR has asked permission to issue \$22.2-million of first and refunding mortgage 4% bonds, due 1974-75. The road wants to use the bonds as collateral on short-term bank loans, which will in turn be used to retire outstanding bonds that cost the roads an average 4.595% interest.

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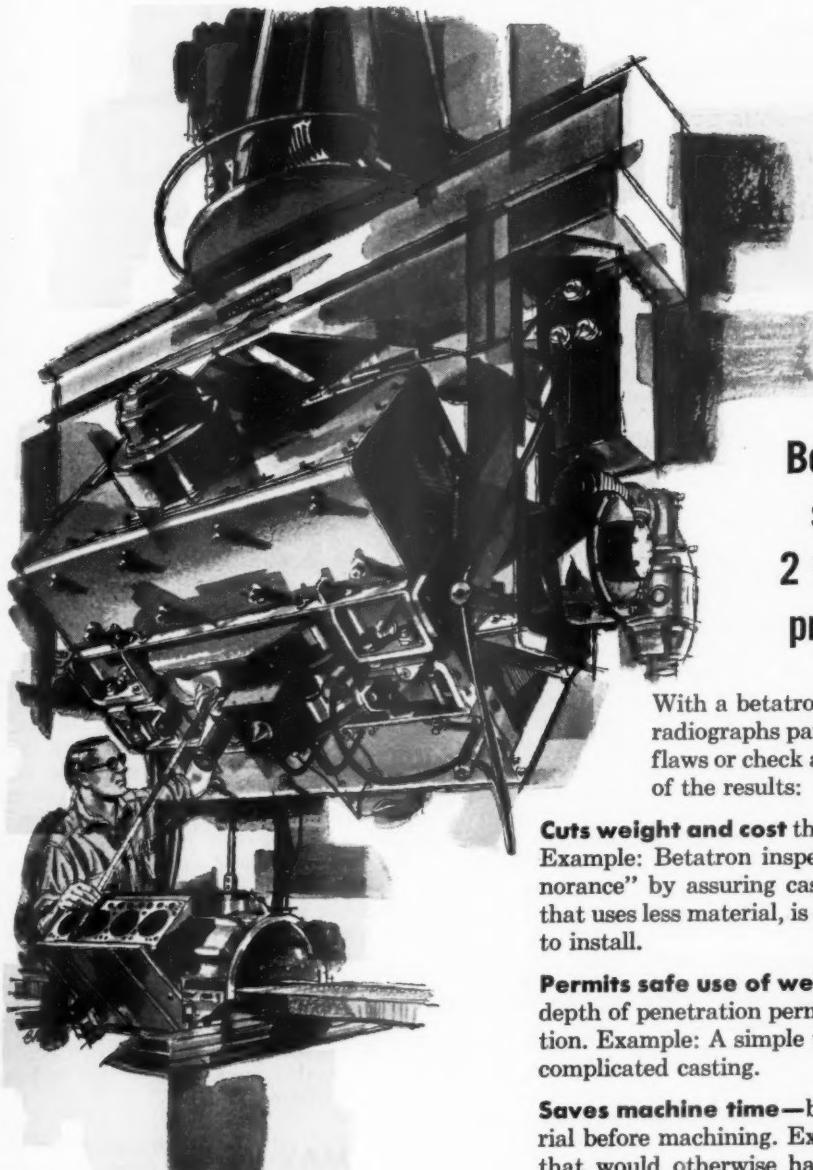
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New Inspection Tool



22-million-volt Betatron sees through steel sections from 2 to 20 inches thick at production-line speeds

With a betatron, one midwestern manufacturer radiographs parts, or a whole machine, to reveal flaws or check alignment of parts. Here are some of the results:

Cuts weight and cost through elimination of over-design. Example: Betatron inspection reduced the "factor of ignorance" by assuring casting quality. Result: A product that uses less material, is easier to manufacture, and easier to install.

Permits safe use of welds because betatron's speed and depth of penetration permits heretofore impossible inspection. Example: A simple two-piece welded part replaced a complicated casting.

Saves machine time—betatrons find flaws in raw material before machining. Example: Savings in machine time that would otherwise have been wasted paid the entire cost of the betatron installation in less than six months.

Converts rejects into usable parts by locating flaws accurately for repair. Example: Hundreds of thousands of dollars' worth of parts saved because betatron inspection permits easy repair of cracks in castings.

You can get complete information on how an Allis-Chalmers 22-million-volt betatron may find cost-cutting application in your plant. Call the nearest Allis-Chalmers office or write Allis-Chalmers, Milwaukee 1, Wisconsin.

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MANAGEMENT

The New Look in Antitrust

● The Justice Dept. has adopted a technique for handling cases out of court—thus dodging the likelihood of a long-drawn-out trial.

● Biggest case that was handled so far is Eastman Kodak's. Here's a step-by-step account of it.

Eastman Kodak Co. of Rochester, N. Y., has agreed to make some fairly sweeping changes in its operating policies. The changes were urged on Eastman by the federal government's antitrust officials (BW-Dec. 25 '54, p24). It has all been accomplished without a single hour of court trial.

This is part of the Republican antitrusters' enforcement policy. They have stressed the idea of getting as many cases as possible—old and new—settled out of court.

They have tried to avoid delay and long-drawn-out court trials on new cases by getting companies to agree, ahead of time, to changes the antitrusters want made. Such changes in each case are written into a consent settlement, which is then filed in court at the same time as the formal suit. When the judge signs the settlement, it becomes binding on the company.

• Step-by-Step—Eastman's is the biggest case to have been settled so far with this out-of-court technique. In all, about 114 hours of face-to-face conference between the company and government representatives went into the case.

It culminated on Dec. 21, 1954. Two things happened simultaneously: (1) The government filed a suit charging Eastman with having a monopoly in the color film processing industry and with signing illegal "fair trade" contracts. (2) A consent decree was entered, settling the issues in the case and setting up sweeping changes in the industry.

Here's a step-by-step account of the case from its beginnings—a study in detail of the new technique in action:

MARCH. The Justice Dept. received a complaint from a small business, Aljan Camera Co. in New York City, that Eastman was suing for unfair competition and violation of the state fair trade law. Aljan was selling at prices below the fair trade prices set by Eastman. Aljan complained that it should be illegal for a retailer (Eastman controls about 35 of

its own retail stores) to set the price its competition could charge.

Under a procedure commonly used to try helping out on such small business complaints, a Justice Dept. representative in New York called Rochester, N. Y., to talk with Eastman's counsel. At that time, a federal district court in New York had a fair trade case against drug and cosmetics maker McKesson & Robbins, Inc., involving a similar complaint.

The antitrust representative suggested that under the circumstances—a decision in the M&R case might be forthcoming any day—Eastman might think it best not to press the Aljan suit until a ruling in that case had been made. Eastman agreed.

APRIL. The same retailer again complained to the department, saying that Eastman was now pressing its suit. The department again asked Eastman to hold off, since the expected ruling in the McKesson case had not come. A conference between Eastman representatives and the Justice Dept.'s New York office, Apr. 29, was unsatisfactory from the Justice Dept.'s position. Eastman held firm, went ahead with the suit.

MAY 5. Armed with the Aljan complaint and Eastman's known position, and checking the background of a 1913 monopoly suit against Eastman and a sweeping grand jury investigation in 1947, Washington staffers had begun to think of Eastman as a possible antitrust violator. Worth Rowley, a special assistant to the Attorney General attached in a supervisory capacity to the Antitrust Division's Trial Section, and Allen A. Dobey, a top staff trial lawyer and an expert on fair trade, requested permission from antitrust chief Stanley N. Barnes to begin a preliminary investigation.

On the same day, special antitrust lawyers hired by Eastman (the law firm of Donovan, Leisure, Newton & Irvine) conferred with Rowley and Dobey in an effort to recover ground lost by

Eastman at the Apr. 29 meeting in New York. But the antitrusters were aroused and tough, and this in turn touched off a series of fast steps by Eastman.

MAY 7. Eastman announced to its dealers that it was abandoning fair trade pricing on certain products—including some color film items. Eastman then had two cases pending on the subject: one, its own against Aljan; the other, the Federal Trade Commission's charge—since dismissed—that Eastman's fair trade contracts were illegal (BW-Jan. 15 '55, p62).

MAY 11. Eastman counsel again conferred with Justice lawyers to report this move. The department lawyers said they were interested in getting additional information from Eastman.

MAY 17. Rowley and Dobey met him in on what they knew about Eastman's practice of tying processing of film to sale of film, its fair trading practices, and why—from their experience—a closer check might be worthwhile. It was agreed at this conference to start a preliminary investigation.

During this investigation, no FBI assistance was requested or used—as it sometimes is in such cases. Instead, Justice sent out queries to its 12 field offices throughout the country. Each was asked to interview camera stores and film developers in its area. The idea was to see what the photo-finishing business was like, whether Kodak had any competing color processors, and whether finishers were able to handle Eastman film.

MAY 28. Another meeting in Rowley's office in Washington was held, with several of Eastman's lawyers present, to go over the entire situation. Nothing definite was suggested or agreed to by either side.

JUNE 3. The New York trial court ruled in favor of Eastman against Aljan Camera Co., upholding Eastman's fair trade contracts. The decision is now on appeal.

JUNE 17. By this time, the field reports were in and a formal complaint was in the works. Another meeting was held in Rowley's office, and Eastman was informed that

WHY **Du Pont** WILL BUILD IN OUTSTATE MICHIGAN



Plans for construction of a neoprene (chemical rubber) plant in the new Lake Michigan chemical center at Montague, Michigan, have been announced by E. I. du Pont de Nemours & Co., world's largest chemical concern.

The new Du Pont plant will be close to the Hooker Electrochemical Company plant that began production recently.

Hooker will supply anhydrous hydrogen chloride to Du Pont for its neoprene process. Union Carbide and Carbon will build a new plant in the same area to manufacture acetylene for Du Pont and future customers.

Why did Du Pont choose this Outstate Michigan location?

"The plant area is over a huge deposit of salt from which the chlorine will be made (by Hooker)," said a Du Pont announcement.

"The existence of the deposits, the availability of labor, the ample supply of power and good water and proximity to markets are all major factors which led to selection of the Montague site."

Outstate Michigan has plenty of good sites for chemical plants as well as any other plants. Many, like the Du Pont site, offer the benefits of Great Lakes transportation.

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the Trial Section was prepared to recommend filing of a complaint.

The antitrusts offered to discuss the facts and law relied on. Eastman was also asked for the first time officially whether it cared to schedule negotiations looking toward a settlement. Eastman said yes.

JUNE 25. Rowley and Dobey completed their work on the complaint. It was put on Barnes' desk for approval. It was in his office until July 12 for polishing.

JUNE 28. The first conference to consider a pre-filing settlement was held in Barnes' office. This was the decisive conference. Present from Eastman were six representatives, including some really top brass; and from the department, five lawyers and Barnes.

The relative positions: Eastman came in evidently still hoping to get the case dropped by changing its practices. Barnes told them the department couldn't drop matters so informally. He said that if the Attorney General signed the complaint, Eastman would have to "fish or cut bait." From here on Eastman knew that, if the complaint were approved, it would have to accept a consent judgment—or go to trial.

JULY 12. Barnes took the complaint up to Brownell for final approval. Barnes made his case. It was supported by a detailed report on the material and information turned up in the investigation, and a memorandum of law to justify filing the complaint.

JULY 13. Brownell had signed the complaint. It was ready to file in court.

JULY 14. Eastman was advised by letter that the government was ready to file its complaint immediately, unless Eastman wanted to negotiate a consent judgment. A phone conversation between Eastman lawyers and trial staffers in Washington let Eastman know the department wasn't interested in just any decree; it would have to be very complete.

JULY 16. Eastman's lawyers requested negotiations on a consent settlement of the case.

JULY 20. A copy of the complaint was mailed to Eastman. It was exactly like the complaint that later was filed in court by the government. A conversation about this time between Justice and Eastman set up conferences in Washington on settlement negotiations. Around this time, too, actual staff jurisdiction over the case

For the want of a spear...

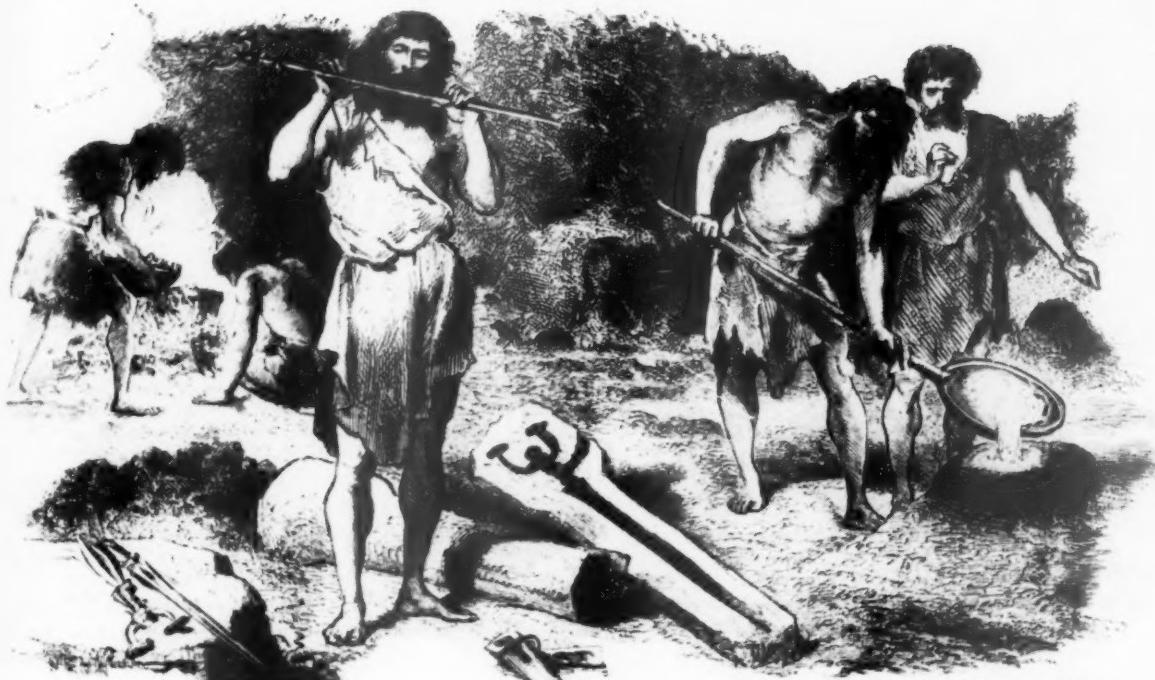


Illustration courtesy of Bettmann Archive

FIRE CLAY came into being!

One of the earliest uses of fire clay was for molds used in the manufacture of weapons for self defense. And so down through the ages man has depended more and more upon this essential material for many basic needs of civilization.

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stantly progressed. Furnace temperatures go higher and higher . . . and fire clay refractories keep pace to withstand the higher heat.

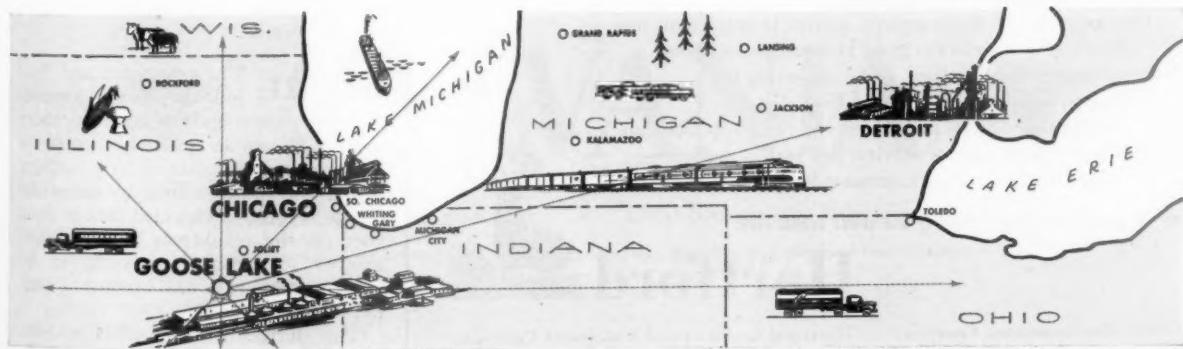
Illinois Clay Products Company manufactures many types of refractories and supplies leading steel plants and foundries. Located near the "heart" of midwestern industry, the extensive Goose Lake fire clay deposits and modern processing facilities assure highest quality refractories—with fast, dependable shipments.

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We couldn't put out the fire

But with the Hartford's help, we quickly paid off \$28,893 in customer claims

(Based on Company File #HM54-324)

It was just before a holiday. As usual in the dry cleaning business, we were up to our ears in clothing bundles. Maybe that's why nobody noticed anything wrong until the fire had actually burned through the ceiling.

We turned in an alarm, but there wasn't much we or the firemen could do to save the plant.

Next morning, the men representing our insurance company set up an office nearby. The moment they verified each customer's claim, the Hartford Fire Insurance Com-

pany paid us the money. Then we mailed our check to the customer, with a letter from our president.

Within 16 days after the fire, we paid 622 claims this way. There were 808 all told, so you can see the Hartford was really moving along fast. With their help, we were able to pay every claim so quickly and so fairly that we found customers talking about us all over town.

Naturally, this talk didn't hurt our reputation a bit. We have almost twice as much business now as we had before the fire!

You buy insurance for protection.

But, as the story above proves, service is important, too.

That's why it's always good business to insist on insurance in the Hartford. They are set up to move fast when called upon for help.

Get the dependable protection you need — backed up by the Hartford type of service. See your Hartford Agent or your insurance broker today.

Year in and year out you'll do well with the

Hartford



Hartford Fire Insurance Company • Hartford Accident and Indemnity Company
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was transferred to Antitrust's Judgment Section, headed by William Kilgore.

JULY 27. Eastman counsel and officials conferred in Washington on settlement terms. Eastman was told that divestiture of its processing facilities had been decided on by the Antitrust Division as an absolute requirement of any settlement.

JULY 30. Antitrust staffers and a phone conversation, put their cards on the table. Eastman agreed to work out something on divestiture, and the Dept. of Justice agreed to hold off filing the suit for a few days.

AUG. 3. Eastman submitted a counter to the government's "immediate" divestment proposal: Wait seven years to give competition a chance to grow before decreeing any divestment.

AUG. 4. Substantial agreement was reached on the main terms of the settlement: divestment, separating the cost of processing from the sale price of film, ending fair trade contracts on color film.

AUG. 5. A big round-table conference was held in Kilgore's office in Washington. Barnes was not present. But his staff received instructions from him by phone. The discussions were aimed at preparing a written statement of the basis for a tentative agreement.

AUG. 17. Barnes, back in Washington, held a two-hour conference with Rowley and William P. Rogers, Dobey's trial assistant. The object was to work out details of the settlement.

SEPT. 1. About this time, the written statement on tentative agreement was completed. Then began the long process of hammering out the fine details to fill in the skeleton model.

DEC. 20. Federal Judge John Knight received an advance copy of the complaint and the consent decree.

DEC. 21. The complaint and final judgment were formally filed in court and signed by Judge Knight. Eastman publicly denied it had violated the law in any respect. But it said it was willing to accept the decree because it expected that as time goes on the conditions contemplated, relating to outside processing in increasing amounts, will become a reality.

The decree becomes effective Mar. 21.

"The World's Most Promising Technological Revolution"

The word "electronics," symbolizing the science and industry surrounding the electron tube, became a part of the American vocabulary only a few years ago. The forerunner of the Electronics industry was the radio manufacturing and broadcasting business prior to World War II. Then the war brought the magic eye of radar and other electronic equipment, and the public became aware of that new word—"electronics."

Today, the Electronics industry is an \$8,000,000,000 industry—counting television, radio, military electronics, commercial electronics, broadcasting, and related areas. There is every indication that within 6 or 7 years it will be a \$13,000,000,000 industry. And it will keep right on climbing.

No other major industry will grow that fast by 1960. The Electronics industry has been described, truly, as "*the world's most promising technological revolution.*"

The Armed Services are by far the largest customers of the Electronics industry. The electron tube is the very heart of the modern military force—in communications, navigation, gunnery systems, guided missiles, etc. Not far behind is television, whose growth in the past several years has been unprecedented.

In the years to come, Electronics will become more and more firmly a part of commerce and industry, especially in *computers*, the amazing machines which give new breadth to man's brains and hands.

The future of Electronics has no horizon. Scientists and engineers throughout Sylvania are constantly finding new and better ways to put Electronics to work. They are keeping an eye to the future—assuring constant progress in the years ahead.



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When a Small Company Diversifies

● A new product venture is a vastly more nervous operation for a little manufacturer than a big one. Failure of a product can mean failure of the company.

● Here's the story of Stow Mfg. Co., a small company that took the plunge and came up smiling.

Among the products to be displayed the week after next in New Orleans, at the annual show of the painting and decorating trade, will be a device made by a small company named Stow Mfg. Co. (Binghamton, N.Y.). The device is a rotary scraper, designed to do the work of a blowtorch in taking paint off clapboards.

The scraper is one of several new products developed by Stow in the past year or two. To Stow, these new products are more than just something else to sell. They represent a sharp change in the company's direction—a change that required a lot of thinking and no small measure of courage.

• **Problem**—One of the toughest decisions that a small company's president has to make these days is one that will commit the company to radically new product ventures. Even the managers of big corporations get more and more nervous as the research and development chips pile up on a new and untried contender.

But if the big company's bright new hope turns out to be a dog, the mistake gets lost in other profitable ventures. At most, only a few people lose their jobs. If the little company comes up with a lemon, however, the whole enterprise can collapse.

• **Basket Shortage**—Stow Mfg. Co. is using just about every new trick in the book to avoid any such calamity.

Before it started to diversify, it was a maker of flexible shafting and concrete laying equipment. Stow's problems, typically, came from putting most of its eggs in too few baskets. It had two dominant customers—the U.S. Navy and Sears, Roebuck & Co.

From a business of \$250,000 in yearly sales before World War II, Stow had zoomed to \$6-million by 1943. Unhappily, 96% of this business came from flexible shafting sold to the Navy for remote control of valves.

By 1947, sales dropped to \$1.4-million, and the government's percentage fell to less than 1%. The Navy was temporarily out of the picture, but now Sears loomed like a mountain. In 1947, 41% of Stow's sales went to Sears, which was buying flexible shafting for home workshop equipment.

But Sears, the Korean rearmament,

and a Navy windfall in 1953 actually gave Stow only a series of breathers at best. With a customer lineup like that, the rug could be whipped out from under the company any time.

• **New Strength**—Early in 1953, Stow's president, Clarence F. Hotchkiss, Sr., knew he had to do something fast to replace the falling orders from his two mainstay customers.

The first thing to try, Hotchkiss figured, was to strengthen commercial sales of the regular line. He doubled advertising, called in the sales force for its first headquarters meeting in seven years, started a publicity campaign, entered more trade shows, even started a product information program to college engineering departments.

This hopped-up marketing scheme brought some new business to Stow and, in fact, paid for itself handsomely. But the sales were mostly of flexible shafting to manufacturers. This meant that Stow's sales were controlled by the other companies' sales; Stow's old problems were only partly solved.

• **New Line**—As Hotchkiss suspected all along, successful new products looked like the only avenue of expansion that would give Stow a broader and therefore safer customer base. Actually, what Stow needed was a new line of finished products. But what kind?

The first decision that narrowed the field was Stow's idea in early 1953 to make something that could be sold through the company's distributor web for concrete working equipment.

To each of the distributors that were handling Stow's concrete vibrators went a questionnaire. Listed were 20 products. Stow could make any one of them if the distributors felt there was a market for it. The distributors chorused: "A good powered rotary trowel would sweep the market."

• **Help**—This was a tipoff to Stow, but no convincer. Patent problems loomed; design looked difficult; time was running short for starting a complex development and market research program from scratch.

Stow's small engineering staff was going full tilt on regular flexible shafting design problems. Obviously Stow couldn't reasonably expect quickly to

hire, break in, and get results from a new engineering team on a one-shot design problem. What Stow needed was expert advice.

Stow got it by hiring a Cleveland consulting firm, Designers for Industry, Inc. Stow got this in DFI's package:

- A thorough study of the market. This confirmed the rotary trowel idea, set a price that would be competitive for a new trowel, canceled other product ideas as not promising.

- A survey of existing rotary trowels. This told Stow what users thought such a machine should do—giving Stow a chance to include a batch of new and exclusive features.

- A preliminary design on paper, so drawn as not to infringe any patents.

- A prototype trowel, modified by DFI according to changes suggested by Stow's manufacturing people and a hand-picked sample of users. This became the basis for production drawings, which Stow then undertook itself.

- **Schedule**—DFI started work in September, 1953. Stow made the first shipment from a pilot run of 50 trowels in August, 1954—just 11 months from the time the project was put in DFI's hands. Total cost to Stow for DFI's help: \$14,000.

It will take sales of 400 trowels to get back the cost of employing DFI. Stow estimates it will get 500 orders this year alone. Already, a larger model is in design.

- **Other Roads**—Stow isn't counting entirely on the trowel, however. It has in early production stages a device that can connect rotating shafts at any angle—including 360 degrees. This idea was an inspiration of Stow's own engineering vice-president.

To get more new products, Stow is willing to buy well-developed ideas. It found one right in its own orders-received book. An inventor had developed a rotary scraper to strip paint from clapboard. His design called for a length of flexible shaft, which he had been buying from Stow. He couldn't seem to develop the market enough so Stow bought the idea on a royalty basis. Result: a well-refined new product for Stow, at practically no cost, in the construction materials field where Stow knows the ropes.

- **Today**—"The over-all picture for Stow is more the way I want it to look already," Hotchkiss claims. "Last year, on our business of \$1.3-million, only 32% was in sales to Sears and government buyers. This year I figure we'll do at least \$1.6-million. The best part of that increase to me is that most of the extra dollars will come from a new spread of customers."

SEE FOR YOURSELF—it pays to package in film made of BAKELITE Polyethylene



Packaging by Lassiter Corporation, New York, N. Y.

"they wake up browsing customers"

"Casual customers stop and stare . . . and like what they see, because they can see it." That's how Ralph Taylor, in charge of the New York office of P. H. Hanes Knitting Co., describes the sparkling point-of-sale appeal of their new "Hanes Sleepyhead"—children's sleepers packaged in red-and-white-printed polyethylene.

"It's easy to turn a necessity item into an impulse buy, a pleasure purchase . . . when you have the right package. Here, shoppers see the lovely blue, pink, mint, or maize colors.

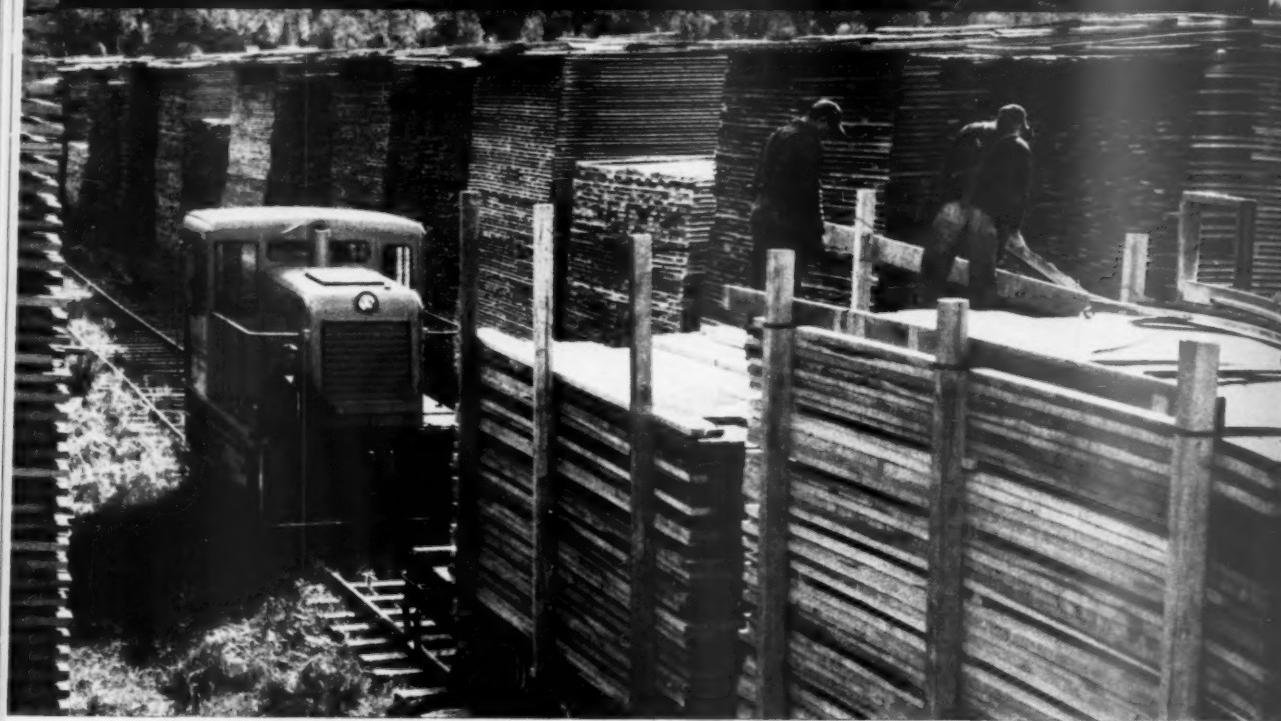
They're attracted. They sense the warmth of fabric. And, we leave the bag unsealed at one end . . . 'open for business' so shoppers can feel the cashmere-like softness of the combed cotton and Dynel blend."

No doubt about it. Besides protection from soiling, the very misty-soft appearance and touch of film made of BAKELITE Polyethylene will rouse sales for you, whether manufacturer or retailer. It's extra strong to resist tears and give complete shelf-life protection. Try it. Call your packaging supplier.



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G-E 25-TON INDUSTRIAL LOCOMOTIVE AT CADILLAC-SOO LUMBER CO. SWITCHES AND HAULS ABOUT 30 CARS A DAY OVER 6 MILES OF TRACK

CADILLAC-SOO SAVES \$4550 FIRST YEAR

G-E 25-ton switcher gives more than 20% gross return on investment through savings in fuel and lubrication alone

By converting from older motive power to an efficient G-E diesel-electric, you can realize the savings that many industries all over the country are getting. Cadillac-Soo Lumber Company, Sault Ste. Marie, Mich., recently reported that its 25-ton switcher is showing a gross investment return of more than 20 percent from cost reductions in fuel and lubricating oil alone. This figure does not include maintenance savings, which in many cases more than doubles the gross return.

"I don't know why we didn't make this switch earlier," says J. S. Landon, general manager of Cadillac-Soo. "It is now costing us only about eighty cents a day for fuel, as compared with about \$17.50 for coal for the old steam locomotive. In addition, we do not have to change the oil in the diesel-electric more than once a month, which is another saving. You can see from this that we are delighted with the new machine."

SAFE, CLEAN, AND QUIET

Another advantage of Cadillac-Soo's new switcher is that it eliminates locomotive fire hazard. Since it does not give off smoke, sparks, or harmful gases, a diesel-electric is ideal for use around a lumber yard—and any area where reduction of fire hazard, cleanliness, and quiet operation are important considerations.

In any industrial haulage job you get the most economical and efficient service from an *industrial* type locomotive—a locomotive designed specifically for industrial service. General Electric is the world's largest manufacturer of this type of motive power. One of the seven standard diesel-electric sizes, ranging from 25 to 95 tons, may be exactly suited to your requirements. For an economic and engineering survey contact your G-E Apparatus Sales Engineer. Or write for the free booklet, *Switch to Diesel-Electrics and Save*, to: General Electric Co., Section 120-73, Schenectady 5, N. Y.

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MANAGEMENT BRIEFS

Salaries, bonuses, and pensions paid to some 20,000 company officers and directors have increased 23.5% in the past five years, the American Management Assn. reports. During the same period, their companies' profits before taxes rose 28% and sales increased 60%. Retailers and wholesalers got the smallest boosts, utility men the largest.

A data processing center will be built by Sylvania Electric Products, Inc., to speed up coordination of financial and production information from 30 of the company's plants. Heart of the center will be a Univac computer, leased from Remington Rand, Inc.

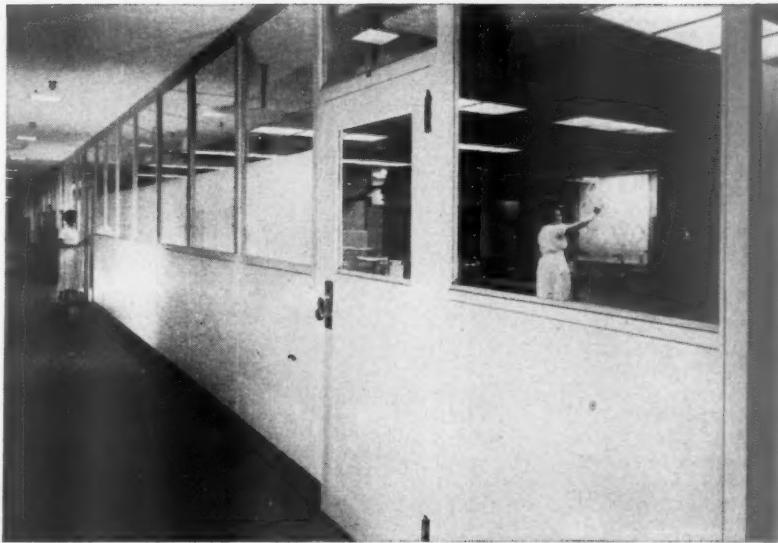
Auto parts maker Budd Co., which is trying to acquire Continental-Diamond Fibre Co., is offering a share-for-share stock exchange to C-D stockholders. C-D, with headquarters in Newark, Del., makes plastic laminates, moldings, fiber, tape, and mica insulation. Desire to diversify is behind Budd's offer, according to company president Edward G. Budd, Jr.

Executive health programs are gaining weight. The National Industrial Conference Board says that 69% of the 120 companies it surveyed recently have installed such programs since World War II.

Indiana University considers troubles common to small, family-owned businesses in its latest case study. According to IU, typical problems are: how to fill the founder's shoes; how to train and motivate nonfamily executives; what to do about friction between majority stockholders representing one family, and minority stockholders representing another.

The National Secretaries Assn. (International) announced this week that 222 more U.S. secretaries passed the association's latest 12-hour test, and became Certified Professional Secretaries. Aim of the CPS program (BW-Mar. 15 '52, p55) is to upgrade secretaryship to a professional level by setting high certification requirements. So far, 582 have made the grade.

Big business once again is moving in on the Great White Way (BW-Jun. 5 '54, p68). Kraft TV Theater staged an original drama, Patterns, about the inner workings and executive pull-and-haul of a company, with a president plotting to oust an executive. The program was so well received that Kraft is re-running it Feb. 8 (9-10 p.m. EST, NBC).



HAUSERMAN MOBILE WALLS

Save \$86,223 in 15 Years

IN UPJOHN RESEARCH LABORATORY BUILDING

Since 1939, revolutionary developments in pharmaceuticals have resulted in constantly changing floor space requirements for leading producers in that field. The Upjohn Company, Kalamazoo, Michigan, has found it easy to meet those fast-changing space requirements . . . easy to maintain high efficiency in its Research Laboratory Building . . . with walls that can be taken down and re-erected again and again — Hauserman Movable Walls.

To meet these necessary rearrangements with ordinary tile and plaster walls would have cost approximately \$167,373 . . . not including the expense of lost productive time during remodeling. With Hauserman Movable Walls, the rearrangements have been made in hours, rather than in weeks, at a savings of \$86,223.

Result: During the past two years, The Upjohn Company has installed approximately 5 miles of Hauserman Movable Walls in its new main plant in Kalamazoo. Isn't there an idea here for you?

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Describes the many cost-saving advantages of using movable steel walls for every type of non-residential application . . . also reports on how eight companies saved a total of \$575,363 by using Hauserman Movable Walls. Write for your copy today.

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LOCAL BUSINESS

Tide Plan Rises Again

EASTPORT, ME.—Hopes for the revival of the Passamaquoddy tidal project perked up a little here last week after Pres. Eisenhower's budget message.

In submitting his spending plans to Congress, Pres. Eisenhower underscored a \$1-million set-aside for a new study of what was once a New Deal prize project—the harnessing of the tides of Passamaquoddy Bay to provide electric power. After an ill-fated attempt at construction, the Roosevelt Administration abandoned work at the bay in 1936.

Actually, however, the idea of Passamaquoddy has never died, at least not in Maine. Chambers of Commerce and other groups have kept it alive locally, and, periodically, it has come up nationally, both in the U.S. and Canada.

In 1950, the International Joint Commission financed a \$60,000 Canadian-U.S. study of the project, wound up recommending a further \$3.9-million survey. An attempt to get money for it passed the Senate last year, but failed in the House.

Maine believes the \$1-million that the Administration will ask for will be only the first installment for the study; the word is that Sen. Margaret Chase Smith has a pledge to that effect. Reports are that Canada is ready to join in the study, once the U.S. decides to go ahead.

Hard Water Again

TOLEDO—Toledo's spanking new \$770,000 water-softening plant is giving the city a lot more trouble than it ever expected.

The plant, which opened last fall after five years of debate about it, has been shut down tight until Mar. 1. The reason: complaints from three Toledo industrial companies—including Libbey-Owens-Ford Glass Co., the city's biggest water consumer—and general dissatisfaction by city engineers over the operation of the plant.

The chief cause of the trouble is that un-reacted calcium, used in the softening process, builds up in the high-temperature heat converters of the three companies.

L-O-F complained that it was having to clean out equipment three times a week, instead of its usual once-a-week treatment.

By shutting down the plant until March, the city hopes to find a way

out of the problem. In the meantime, citizens are back on their old hard water that brought gripes from housewives for years.

Commerce Moves In

OAK RIDGE—Work on a long-planned commercial center got started last week at this atomic city of 31,000 population.

The project, which has been in the negotiation stage for four years, is being built by Oak Ridge Properties, Inc.—a private development company headed by Guilford Glazer, president of Glazer Steel Corp. in Knoxville. Glazer has a lease on 117 acres of government-owned land lying along the main thoroughfare, Oak Ridge Turnpike.

The first section of the center, which Glazer has named Downtown, calls for space for more than 60 retail stores and parking for 2,000 cars.

The stores are to be ready next fall. Future plans include a post office, office buildings, banks, and theaters.

Wake of the Big Wind

COLUMBIA, S. C.—Hurricane Hazel hasn't quite blown over this area yet.

Earlier this month, a group of property owners complained to the state's insurance commissioner that the insurance companies were stalling on the settlement of damage claims resulting from the big blow. The commissioner promised an investigation. Although there are no findings yet, the companies say they're sure they're in the clear. Nevertheless, they admit they're smarting under the bad press notices they're getting in this area.

Actually, the main trouble seems to be that companies are paying off only on wind damage; most of the policies don't cover damage from rising water and waves. The companies say they're leaning over backwards to be fair. But they state flatly they're not settling for the full amount of claims where wind and water damage are both involved.

The trouble is that when the house is gone, it's awfully hard to say whether it washed away or blew away before the waves came.

Can't Please Everyone

NEW YORK—In the wholesale grocery business, it's apparently the little things that count.

R. C. Williams & Co., a wholesale grocer, had a warehouse on Leggett Avenue in the Bronx. The address was embarrassing to Williams—Leggett happens to be the name of one of its competitors, Francis H. Leggett & Co. of Manhattan.

Hugo Jaburg, president of Williams, wrote a note to the Bronx borough president asking if the name couldn't be changed.

In due course—last week to be exact—it was. By a 23-to-2 vote, the city council decided that it would rename two blocks of Leggett Avenue as Jaburg Avenue.

This didn't end matters, however. Some of the other Leggett Avenue businesses want to keep their Leggett Avenue address. Calling the Williams company "an upstart," they demanded that Mayor Robert F. Wagner veto the name change.

Said the New York Times cryptically: "Our city council . . . never behaves so foolishly as when it is engaged in foolish business. . . ."

Update

COLUMBUS—Ohio legislative leaders are reportedly ready to start a move to junk the controversial axle-mile tax that this state put into effect a year ago (BW-Jan. 23 '54, p98).

Pressure to shelve the levy has built up lately as the result of a new study of its effects and its own disappointing revenue record. The study, prepared by Battelle Memorial Institute for the Ohio Trucking Assn., found that trucks were being forced to pay a disproportionately high tax when compared, on a weight basis, with private cars.

Apart from this, the tax is yielding only about \$11-million, against the original estimate that it would bring an added \$20-million into the state's coffers.

Since its enactment, there has been a breakdown of Ohio's reciprocity agreements with other states. To date, 18 trucking companies have moved their headquarters out of the state, while another seven companies have gone bankrupt.

As yet, no bill to scrap the tax has been introduced into the legislature. However, if one does come up, it is sure to run into a fight. Ohio's Gov. Frank J. Lausche, who last fall won an unprecedented fifth term, has said that he not only wants the axle-mile tax kept, but wants it strengthened.



famous for over

50 years -

fine saw steels

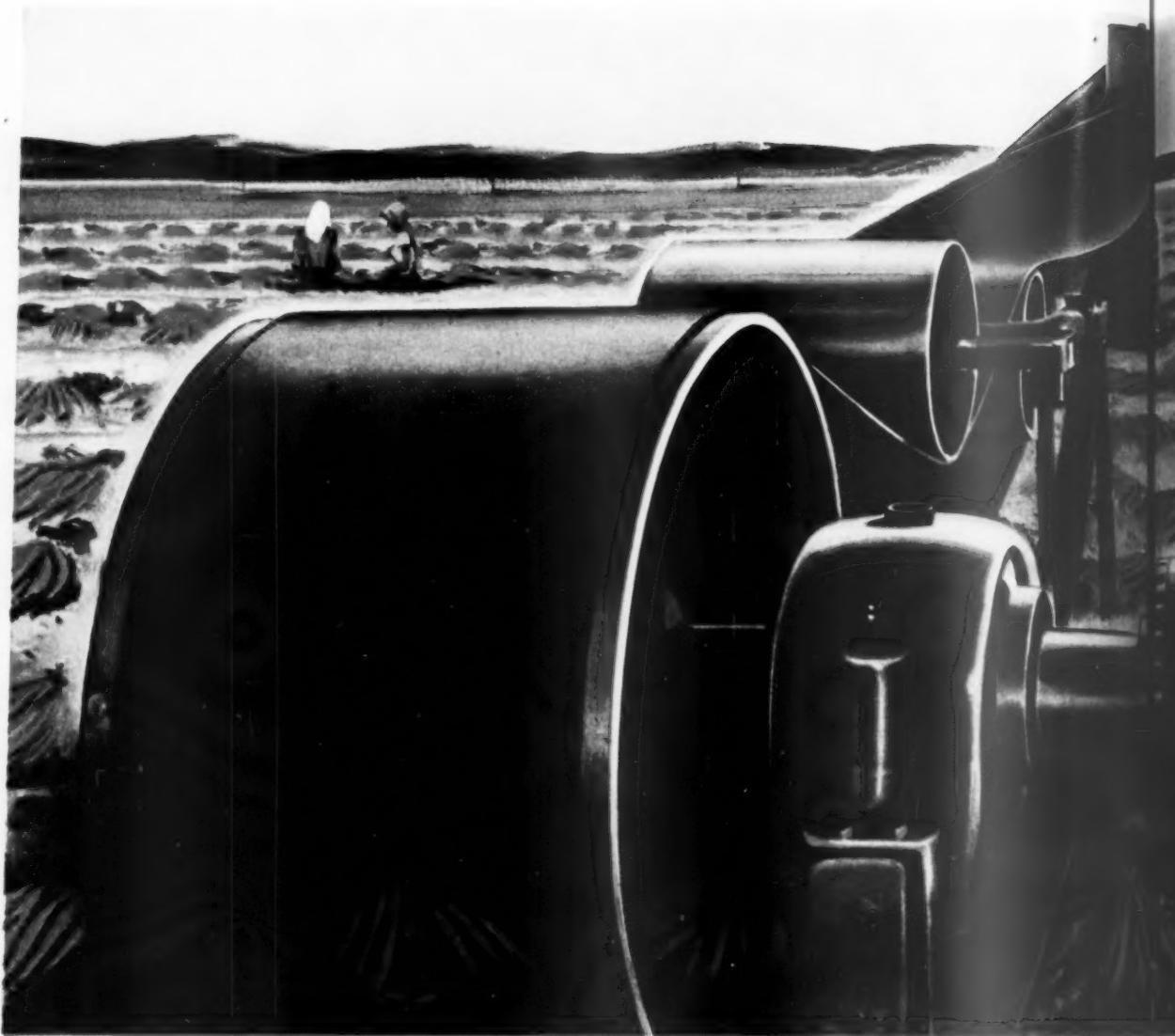
by JESSOP

The name Jessop has been synonymous with fine quality steels for 170 years. Jessop metallurgists and production men pioneered many "firsts" in the specialty steel field. For instance, 53 years ago Jessop became the first producer of quality saw steels in the United States. Today, Jessop is making further strides in this field. It is one of very few domestic sources for periphery-rolled saw steel circles and ground and tempered steels for the manufacture of saws. There are several reasons for the consistent high quality of Jessop's saw steels. First of all, Jessop

rigidly controls its melting formulas and pours ingots small enough for cross rolling. This assures a fine, uniform grain structure so that the stock blanks well, forms well, swages well, and has superior edge-holding properties. Moreover, though Jessop's tradition dates back to 1784, it is today a young, revitalized organization aggressively building new business on value received. The new Jessop team will give you better service and better delivery than you can expect elsewhere. Send in an order and find out how good this saw steel is.

JESSOP

STEEL COMPANY • WASHINGTON, PA.



How to buy Crop Insurance... fo

Growing problem for many farmers in the Southwest is round-the-clock irrigation. A few hours under blistering sun without water can ruin the healthiest crops. Such was the case with one Arizona farmer who relied on deep wells to keep his fields green.

Trouble was the heart of his system—a 3,000-gallon-per-minute pump—constantly kicked over its traces. Its drive was too short for ordinary flat belts to handle its rugged quarter-turn. *No belt lasted over four months.* And to redesign the drive to avoid breakdown during the nine-month season would cost \$5,000.

How to insure the crop, without this expenditure, was the problem given the G.T.M.—Goodyear Technical Man.

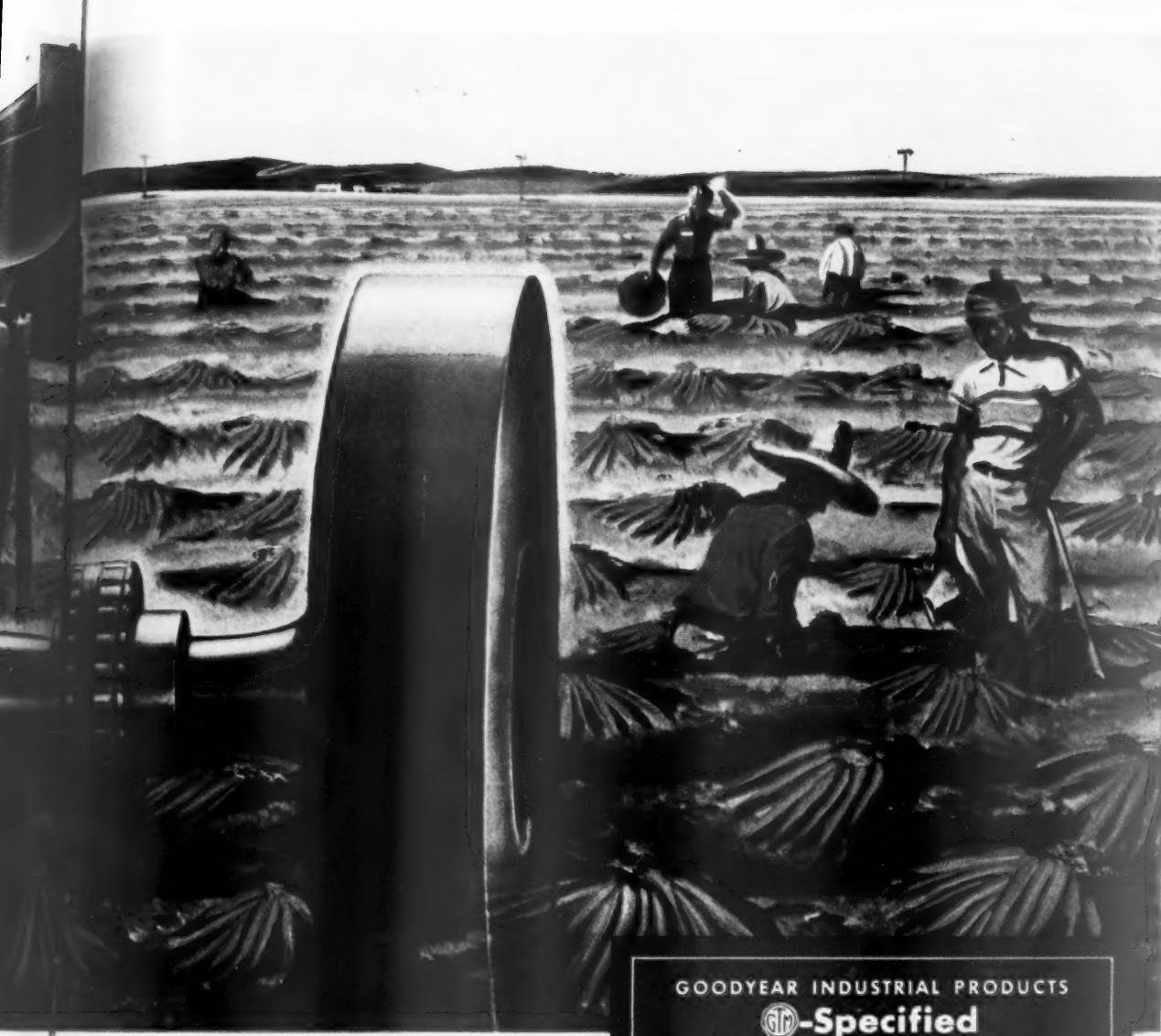
After studying the drive, the G.T.M. recommended the revolutionary new COMPASS HD Transmission Belt—the world's first flat belt built with endless, Triple-Tempered (3-T) Cord, developed by Goodyear Research.

16 months later, after four times the average service, the belt finally failed and was replaced with another COMPASS HD Belt. 3-T Cord thoroughly proved it could resist the heavy load and the tortuous twisting and flexing to the point where the belt gave trouble-free operation.

3-T Cord is the result of an exclusive, triple-action tempering process, involving Tension, Temperature and Time, which sets synthetic cord at its maximum strength and resiliency. It makes possible a COMPASS HD Belt that's

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your Tele



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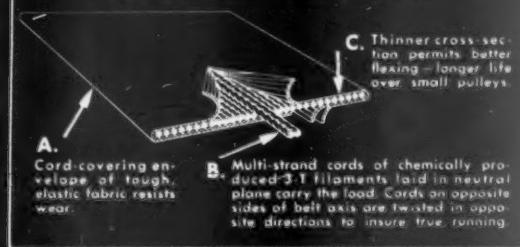
up to 26% thinner, up to 60% stronger than other flat belts. For details on how it cuts drive costs to the bone, see the G.T.M., your Goodyear Distributor or write Goodyear, Industrial Products Division, Akron 16, Ohio.

YOUR GOODYEAR DISTRIBUTOR can quickly supply you with Hose, Flat Belts, V-Belts, Packing or Rolls. Look for him in the yellow pages of your Telephone Directory under "Rubber Products" or "Rubber Goods."

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for heavy-duty, high-shock-load drives



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Now, as in 1908, America steps out in high-spirited pride on wheels by Kelsey-Hayes. Behind their striking beauty and stalwart performance is the accumulated knowledge and skills of 46 years of superior wheel-crafting.

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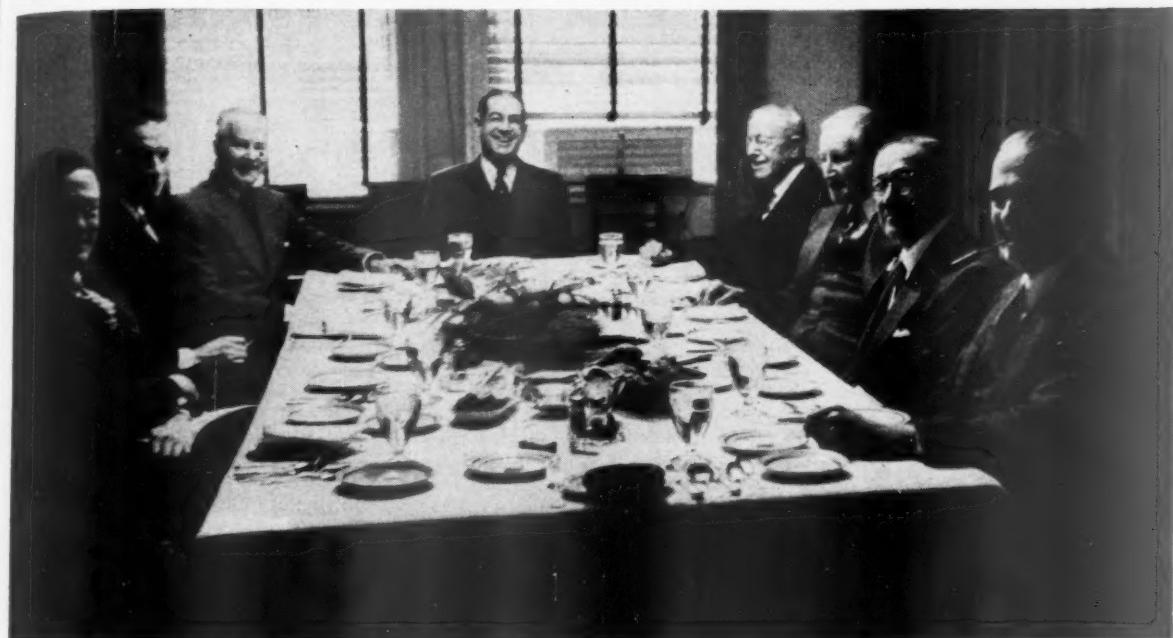


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COMPANIES



THE PARTNERS of Coverdale & Colpitts are engineers who apply their training to general business problems.

Their Stock-in-Trade: Experience

New York newspapers last week shouted joyfully about a colossal vision announced by the Port of New York Authority and the Triborough Bridge & Tunnel Authority. The vision involved half a billion dollars' worth of bridge and highway building. It foresaw a year—1960, if all goes well—when citizens of New York and surrounding points would be able to move into and out of and through the huge, crowded, water-bounded city with considerably more ease than is possible today.

Behind the face of this vast scheme, though the newspapers made little mention of the fact, sat the nine genial men pictured above and on page 82. They are the partners of Coverdale & Colpitts, a firm that is best (though somewhat inadequately) described as an engineering and general business consultant. Coverdale was one of several consultants that gathered hard facts and figures to bring the bridge and highway plan down from the realm of fantasy. Coverdale's main job was to survey traffic, present and future—to translate into usable terms the whole vast panorama of automobiles, trucks, and buses weaving in and out of the metropolis.

It was a big job. But Coverdale knew how to go about it, for the firm had

done the same kind of work before. Coverdale has done many things before. Its stock-in-trade is experience.

• **Experience**—Coverdale is an example of a type of company that is little known to the general public—even to the general business public: a consulting engineer that gives general business advice. Usually such firms develop out of consulting engineer practice for utilities, railroads, and transit systems. While applying his special knowledge to specific engineering problems, a certain type of engineer gets the urge to apply his precise analytical techniques to general management situations.

The process is gradual. The "business engineer" generally starts by attacking problems that involve evaluation of physical plant. He moves toward evaluation of a plant's earning capacity. Eventually he finds himself a recognized expert in a broad range of problems.

That's where C&C stands today. The firm has evaluated railroads and urban transit systems, estimated the revenues of proposed toll bridges and turnpikes, studied plant locations, worked out the economics of airline operation. It has studied new products, given expert testimony in tax cases. It has loaned its partners out as execu-

tive officers of troubled companies and of companies that are doing well.

• **Asset**—This kind of work requires experience more than anything else. Coverdale's most valuable asset is the store of knowledge in the minds of its partners.

Coverdale likes to keep these minds milling around together. For that reason, it has no branch offices. It doesn't want a New York attitude battling with, say, a San Francisco attitude. Its headquarters are in a building at the foot of Wall Street. Alongside the nine partners are some 40 engineers and an auxiliary staff totaling roughly the same number.

Proceeds from the sale of experience are C&C's own secret. But it does not mind admitting that its annual revenue runs over a million dollars. It has no shortage of clients. "People hire us," says senior partner George W. Burpee, "because they know we will tell them the unpalatable truth."

I. How It Grew

It is not easy to make people pay for unpalatable truth unless they are convinced it is the truth. Coverdale & Colpitts has spent half a century build-



SENIOR PARTNER Burpee: "People hire us because they know we will tell them the unpalatable truth."

ing a reputation for being able to find out the facts.

The firm started as an idea in the mind of W. H. Coverdale, a construction engineer for the Pennsylvania RR, back in the 1890s. Coverdale had become a student of railroad annual reports. In his opinion, they showed that much could be done to improve operating practices.

Around the turn of the century, Coverdale joined J. G. White Engineering Corp., a company then doing construction work and some "economic engineering." In 1904, following up the idea he had been mulling over for years, he set up in business as W. H. Coverdale & Co. This was the nucleus of C&C.

• **Capital Gain**—Coverdale got some small jobs, several of them for railroads. Business slowly picked up. Coverdale's first big job came in 1913—a report to bankers on reorganization of the old Southern Iron & Steel Co. into Gulf States Steel Co. Coverdale became Gulf States' consulting engineer and moving spirit; years later, in 1926, he became its president.

His work for Gulf States did not slow the growth of his own firm, however; nor did it slacken his interest in railroads. In the same year as his Gulf States report to bankers, he gained a partner. He had done a study for a banking group on the earning capacity of the old Kansas City, Mexico & Orient RR. He reported to the bankers that the railroad had little to offer except its chief engineer, Walter Colpitts. In 1913, the two became partners.

• **Railroad Work**—The time was ripe for an outside consultant to railroads. A wave of rail reorganizations had already begun; there was a need for an impartial analyst to figure out in each case what earnings each of the mortgaged parts of a railroad contributed to the system, so that there would be some basis for

figuring out how the various securityholders should be treated in the reorganization. In 1916, C&C did what is believed to be the first detailed breakdown of the earning capacity of the different parts of a rail system—in this case, the Missouri-Kansas-Texas RR (the Katy), then in reorganization. The question was: What relative portion did each of the mortgaged lines contribute to the system? By working out what the earnings of each section of the Katy would have been if it were a separate railroad, Colpitts was able to determine how the various securityholders should be treated in a reorganization. Through the years, the firm has assisted in 27 rail reorganizations.

Other reasons why rails often needed an outside analyst: It would often happen that several roads operated a common terminal or rail link, and the roads would find it hard to agree on a way to split up costs and revenues. Coverdale & Colpitts came in handy for this kind of work.

The firm was often called in, too, to supply an outside valuation whenever a railroad was considering a financing plan or buying another road.

Coverdale & Colpitts continued to do work like this during the 1920s. The Van Sweringens, busily building up a huge rail empire, were often C&C's clients. The firm became a recognized authority on railroad matters.

II. Branching Out

In the consulting business, one thing usually leads to another. C&C's railroad work led directly into another field of transportation—urban transit.

It jumped into the field in 1921, when it was hired to shed light on the financial labyrinth of New York City's transit system. It has been connected with the New York transit and highway traffic problems ever since. In 1946, the firm got another major job—this time in Boston. This involved studying a whole complex of surface rail lines, subways, elevated railroads, and buses. The firm is now doing a job in Los Angeles, a study of possible monorail and bus transportation facilities.

Passage of the income tax law in 1913 gave C&C another avenue up which to pursue its business. Many companies whose stock was closely held, and had no market valuation, found it necessary to set a "synthetic" valuation for tax purposes. This gave C&C some work.

• **For Industry**—Until 1935, roughly 80% of C&C's fees came from work on various aspects of transportation. In 1935, industrial work took the lead suddenly. This was because of (1) passage of the securities acts, and (2) entrance into the firm of a Wall Streeter named Augustus Page Farnsworth.

The securities acts required that a detailed prospectus precede a corporate financing. It was a natural opening for C&C. With its ability to analyze companies and translate them into figures and facts, the firm stood ready to help anybody who needed to work out a prospectus. Many investment bankers called for help.

Farnsworth had been an "investigating engineer" for National City Co., underwriting and distribution arm of the National City Bank of New York. The new securities law compelled a split. National City Co. broke up; Farnsworth went to C&C.

• **Dissent**—C&C findings are sometimes challenged. A few years ago, for instance, New England interests proposed a steel mill on the Connecticut shore at New London. C&C partner George V. T. Burgess studied the matter and reported, in 1951, that the project would not be feasible unless carried out by an established steel company, since it would lose money in its first years. The report was challenged; Burgess withdrew his report and checked his data once again. He came back later with the same report. The mill was never built.

• **Management**—Coverdale & Colpitts is available for any company that wants a professional manager or director. The firm's partners have often served and are now serving as executives and directors of various business enterprises—sometimes even as actual operating managers. The procedure in this case is that the company pays the executive salary to C&C and C&C pays the partner. In the past few years, 7% to 10% of the firm's total revenue has come from this source.

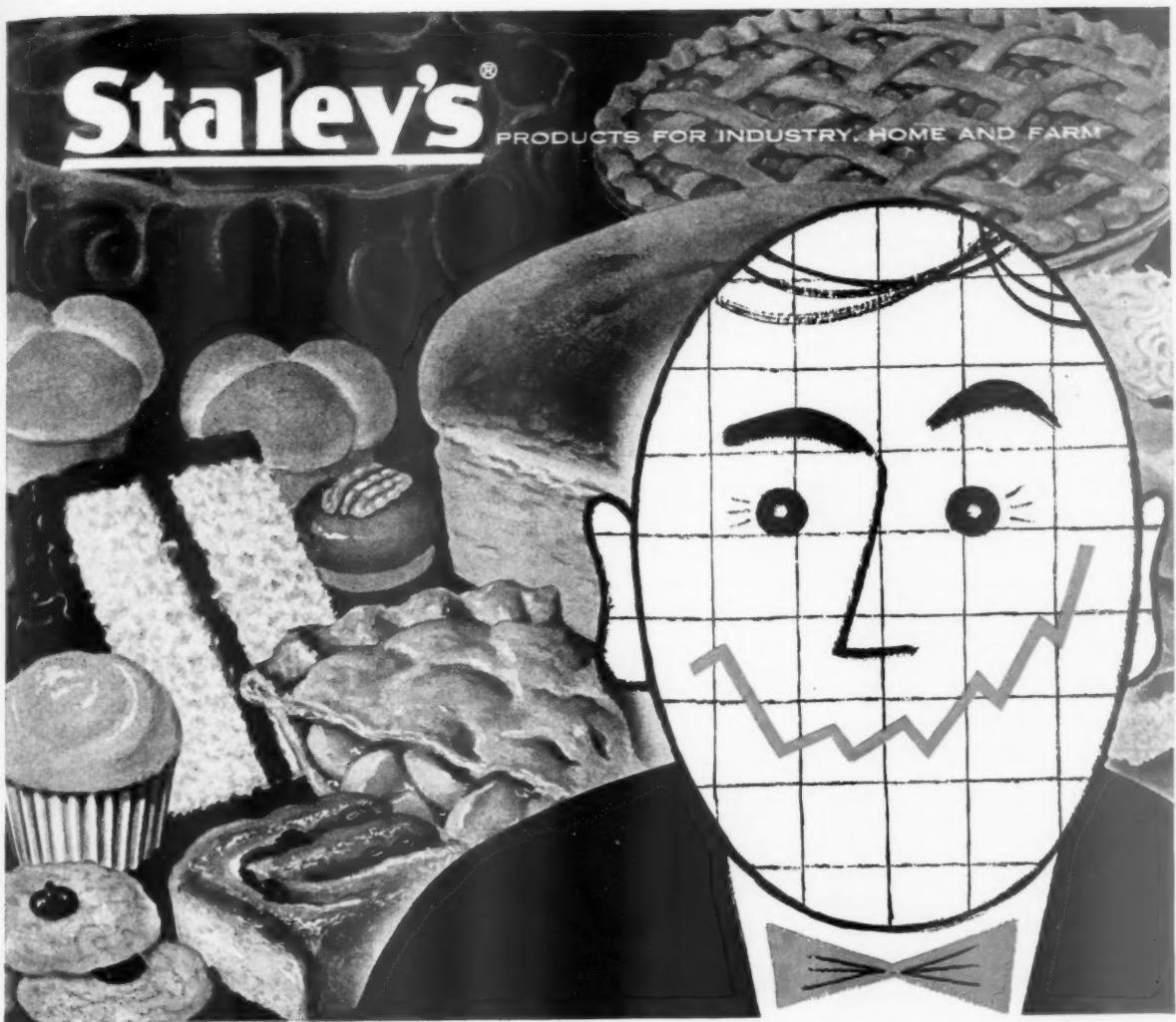
Partner John Slater, for instance, is president of American Export Lines and board chairman of the New York, New Haven & Hartford RR. George Burpee was appointed president of General Aniline & Film Corp., from 1943 to 1947, by the U.S. Alien Property Custodian. He is now a director of Kaiser Steel Corp., Bank of the Manhattan Co., and other companies.

III. How It Works

Thus, Coverdale & Colpitts progressed from a consulting engineer for railroads to a consultant on just about anything. The original partners have both died—Coverdale in 1949, Colpitts in 1951—but the firm continues along the broad road they mapped out.

Exactly how does C&C go about its work? A good way to get an insight into its operations is to watch it at work on a highway traffic survey.

• **Expert**—In 1953, highway traffic work accounted for 40% of the firm's revenue. It is estimated to have made up 60% in 1954. The firm has made it-



How Staley's baking ingredients help put the smile on more sales charts

Commercial Bakers depend on Staley's Syrups and Starches to improve flavor and texture . . . bike profits!

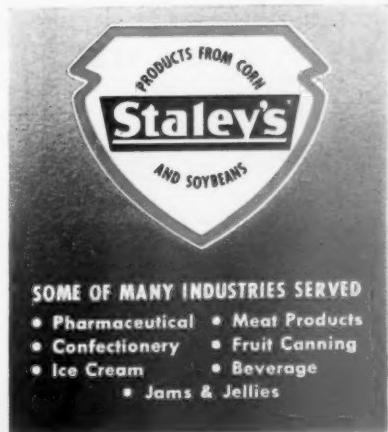
In these days of rising costs and intensified competition, baking companies, like other American industries, welcome new ways to increase profit margins and push a sales chart to a steadfast "smile."

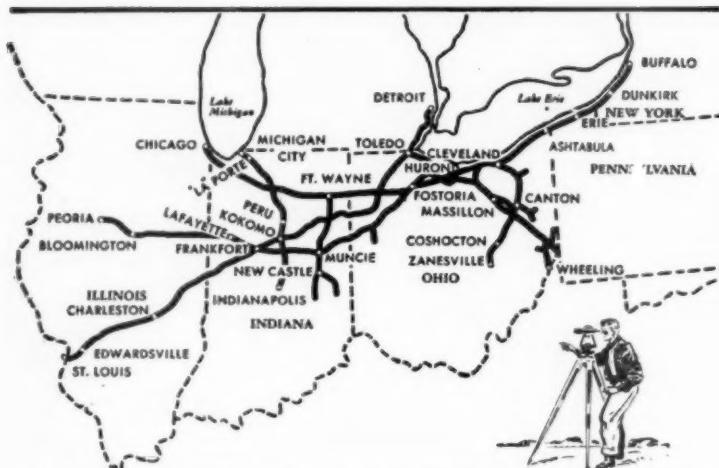
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INFLUENCE MANAGEMENT MEN

"... will be basing their decision to invest on Coverdale & Colpitts' study . . ."

C&C starts on p. 81

self a recognized authority on highway traffic estimates. Investors have bought over \$1.5-billion of turnpike bonds on its say-so since the first postwar toll road—the Maine Turnpike—was financed in 1946.

Last year and in 1953, C&C was busy studying the feasibility of a proposed Iowa Turnpike. Here's how the job was handled:

In May, 1953, partner Sam Brown went to Iowa to discuss the study with the State Highway Commission. After a day's talk, C&C was engaged. It went to work almost immediately.

Its job was to estimate how much traffic would use the projected turnpike, what the optimum level of tolls should be, and how much revenue could be expected in future years. For this, C&C needed to find out how much potential traffic was already using existing roads near the proposed turnpike route. Working under C&C's supervision, the state highway department hired a corps of college students, gave them some brief training, and sent them out on Iowa's roads.

• Gathering—The students' data—which included type of vehicle, origin, and destination—was processed by machine. Eventually the entire results of the survey came to C&C's office in New York.

Here, three engineers headed a staff that proceeded to translate the data into an estimate of what the project's traffic would have been in 1953, if the turnpike had then existed. This was projected into the future, translated into toll revenue. The final prediction was that if the turnpike's first full year of operation was 1958, it would take in about \$8.8-million—the amount increasing 4% each year until 1964 and then increasing at a smaller rate. C&C then went on to discuss the details of financing the turnpike.

It was a highly detailed job, requiring experts. If the Iowa Turnpike is built, it will be financed by millions of dollars from private investors. Many of them will be basing their decision to invest on C&C's study.

C&C engineers are still a little defensive about the fact that traffic on the New Jersey Turnpike has far outrun their original estimates. They underestimated "induced traffic," trips that never would have been made without the superhighway. But they point out that they have been able to estimate this factor more closely on recent toll roads.

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Improved customer relations. Often, a customer will call in person . . . request that a quotation be sent on a sketch "which can't be left behind." A Verifax copy is made . . . customer can leave in a minute.

Saves insurance costs. When original Annin and Co. designs were mailed to customers, the



insurance cost was 90¢ per item. Now, Verifax copies are sent *uninsured*.

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Kodak

MARKETING

Color TV Fades Into the Distance

● The first year's go at marketing color video was something of a flop.

● Apparently, the industry wasn't technologically ready to deliver to a mass market.

● High price, lack of programming, and unexpected interest in black and white were biggest blocks to sales.

● Net result of the try was to push back the date when color will take over.

Last February, the vanguard of color TV unfurled its banners and marched on the television market. Loyal supporters of video's latest miracle optimistically talked of color set output of anywhere from 100,000 to 200,000 sets during the year. Sales predictions of 50,000 sets didn't seem out of line.

A year later, as the smoke clears, it becomes obvious that the advance guard has barely established a beach-head. While the official tally isn't in yet, Radio-Electronics-Television Manufacturers Assn. said last week that color production was "somewhat in excess of 20,000." Actual sets in use, the industry estimates, run in the neighborhood of 10,000.

Some of the biggest names in the field could say, I told you so. It was about a year ago that General Electric Co.'s Dr. W. R. G. Baker warned that competition had pushed color TV into the market before the industry was technically ready (BW—Apr. 24'54, p43). To this, Philco Corp., Allen B. Du Mont Laboratories, and others said a round amen.

• **No Predictions**—Four companies—Radio Corp. of America, CBS-Columbia, Inc., Westinghouse Electric Corp., and Motorola, Inc.—took the plunge in a big way. Despite the sad results, none admits to any great discouragement. Even Westinghouse, which as the pioneer on the market probably took as stiff a licking as any, says it took the gamble with its eyes open. Motorola is wholly bullish.

But the silence about 1954's record—and still more, the silence about 1955 plans—tells the story. Apparently right now color production is about at a standstill. CBS-Columbia is winding up production of its first batch of 3,000 sets; further production plans are up for "review." Westinghouse,

now finishing its 19-in. output, will go into production again "when demand warrants"—perhaps around midyear. Motorola, which says it sold more sets in 1954 than the rest of the industry combined, is turning out sets on a "limited basis." GE and Philco have no plans for early 1955. Admiral is showing color sets, but that's about all. Even RCA is making no predictions as to this year's output.

One company, it is true, has come out with a definite statement. That's Raytheon Mfg. Co. It will make between 25,000 and 30,000 color sets this year, it reports.

The net result of all this is to push back the date for mass production and merchandising. Industrywide predictions for 1955 output now run anywhere from 100,000 sets to 300,000—down considerably from the 800,000 predicted in 1953 (BW—Jul. 25'53, p132). Most people think it will be mid-1956 before color really gets off the ground.

• **Behind the Flop**—The experts have little new to offer to explain 1954's disappointment. The retail price, with an \$895 floor, still looks to some to be the big block to sales; certainly it is a block to any mass market. But RCA and CBS-Columbia both feel there should be a cream-of-the-crop market at that price.

Others figure that the lack of color programs is still the worst handicap. National Broadcasting Co. and Columbia Broadcasting System—the only networks as yet offering color programs—have little to say about their 1955 plans.

NBC says only it is sticking to its original schedule, points out that it recently added a new weekly color show, sponsored by Eastman Kodak. CBS's vice-president, Richard Salant, denies rumors that CBS would quit

colorcasting when its first year of color shows rotated among sponsors ends this spring. But CBS has made no official announcement of what it will do after that.

The third bogey—the small picture—is at least partly licked. The 15-in. sets are no more; the 19-in. tube of CBS-Hytron, tube-making division of CBS, gives a 205 sq. in. viewing area; RCA's 21-in. tube gives 255 sq. in.

Set manufacturers repudiate the charge that the sets won't work. Given proper installation and a good reception area, they say, neither performance nor service is a headache.

• **Dark Horse**—A fifth obstacle to color sales is one no one foresaw: the unexpected strength of black and white sets during 1954 (BW—Aug. 21'54, p44). RETMA's early, unofficial estimates of 1954 black and white output now come to roughly 7.4-million, a shade short of 1950's record. On retail sales—an estimated 7-million sets—1954 did set a record.

As long as the consumer will buy black and white like this, dealers aren't going to push color too hard. In this fact, some set makers think, lies the main reason for color's poor performance last year. Manufacturers, too, will oblige as long as the consumer asks for black and white; interest in the replacement market and second-set market is stronger than ever. When the manufacturer and the dealer get hungry enough, they'll push color and color will go over, a close observer believes. Television Digest, a trade publication, believes that color's edge over black and white just isn't good enough to sell color under present price and programming conditions.

• **Bottlenecks**—Meanwhile, all companies are working to break price and production bottlenecks. CBS-Hytron has quit making its 19-in. round tube to concentrate on a 22-in. rectangular tube. The company will say little about this development now, except that it is preparing to sample the industry with it.

RCA pooh-poohs the rectangular tube, insists that its 21-in. round metal tube is just as good and cheaper to build. RCA has promised a simplified circuit—another bottleneck—in the spring; it plans a big promotion splurge to give its circuits a sendoff. But it isn't saying what this might do to the price of the sets.

In another move a couple of weeks ago, RCA whacked its tube price from



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\$175 to \$100. Other manufacturers agree that this was a fine step, but doubt that it will change the retail price significantly. RCA itself, in fact, left its retail price unchanged despite the lower tube price.

• **Keeping Score**—Everyone has an eye on everyone else's progress. Hazeltine Corp. has demonstrated color projection receivers as a possible solution; Chromatic Television Laboratories, Inc., and Philco have demonstrated a

one-gun tube as against the three-gun tube that RCA and CBS-Hytron are producing.

But the day when the so-called "magic figure" of a \$500 retail price tag will materialize still looks remote; no one expects any major price cuts this year.

In this business, you never know the timetable, says one trade observer. The answer may come next year. And it could come tomorrow.

Orange Juice Production:

(millions of gallons)

Here's how it is divided among	1952-53 crop season	1953-54 crop season	1954-55* crop season
Frozen Concentrates (reconstituted)	205.2	268.0	280.0
Canned Juices	62.4	58.7	61.1
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* estimated

Fruit Juice Enters the Lists

It's shipped chilled, complete with water, and delivered to your door. It costs more than concentrates, has seasonal problems.

Chilled, fresh orange juice, shipped whole and distributed by dairies along with the morning milk, is a surprising newcomer to the citrus juice market.

The surprise lies in the economics involved. The frozen concentrate industry took the water out of orange juice and thus cut the freight costs by the margin of the water. The chilled juice people are shipping the water, with the result that the fresh juice costs more laid down at your doorstep than the frozen concentrates you can buy down at the supermarket.

Golden Gift, Inc., the biggest producer of chilled juice (it claims to have 80% of the new business), offers quart-size containers that retail for 33¢ to 40¢. On the other hand, a 6-oz. can of Minute Maid concentrate retails for about 16¢ today (it makes a pint). And seasonal price wars have driven some brands down as low as 10¢ or 11¢ in some areas.

• **Smaller Container**—This factor is a worry to Golden Gift. Indeed, last week it announced that in the near future it is going to bring out a pint-sized container as well as the quart-

size. The new smaller size will retail for about 18¢, which Golden Gift hopes will make the gap seem a little less formidable.

The question is what makes the new whole juice sell at all with this price differential. There seem to be two answers.

The first is convenience. Advocates of the new idea are certain that the fact that the housewife gets the juice delivered to her door and that all she has to do is pour it out at breakfast—no can opener, no mixing—plays a big part in the success thus far achieved. In view of the American housewife's willingness in recent years to pay extra for convenience, this factor undoubtedly plays a part.

The second factor is the promotional appeal inherent in claiming that here is real fresh orange juice.

• **Variants**—The methods used vary with the producers. One, for example, squeezes the juice out in Florida and rushes it North as is. It has to get the stuff to the customer before it deteriorates—or within three days, it figures. Some companies pasteurize the

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juice. Others put in preservatives. Golden Gift uses still another system. First it strains out the pulp. Then it treats the juice with an ultra-violet ray treatment developed by Dr. George Sperti, which delays deterioration. Then it pasteurizes the pulp (the company claims since the pulp has no taste, it doesn't matter how it is treated). Finally it puts the pulp back in because people expect it in fresh juice.

Golden Gift packs the juice in cartons similar to those used for milk, and trucks them to market. All told it has lined up dairies in most big cities east of the Mississippi, including Borden and Sheffield in New York, Hood in Boston.

• **Advantages**—Golden Gift and the other companies in the new business insist that the disadvantage they suffer in higher freight rates for shipping water is offset by other advantages. They say that the initial outlay is less since they don't have to pay for the expensive high-vacuum equipment needed by the concentrators.

There is one snag: The orange crop is seasonal and there is no way for the chilled juice industry to stockpile inventory. (Golden Gift figures that the Sperti process keeps its juice fit for sale for three weeks, though it tells its distributors to move it within 12 days.) As a result, during the off-season in the citrus business, Golden Gift has to mix its fresh juice with frozen concentrates, and sell it under a changed label.

As yet, the chilled juices represent a small fraction of the total market (table, left). The five Florida processors that have adopted the chilled juice told the Florida Citrus Commission last week that in two or three crop seasons they expect production to equal that of canned orange juice.

• **Supermarkets**—Chilled juice processors are counting on supermarket sales to open new markets for their products. Because chilled juice handling is tied pretty closely to dairies—which have the facilities to store and handle it—the dairies themselves sell to supermarkets as well as making home deliveries. The Golden Gift people think they have just begun to tap their market potential. When distribution gets too wide-spread for two-day trucking service from Florida, Golden Gift plans to open new plants in Texas and California.

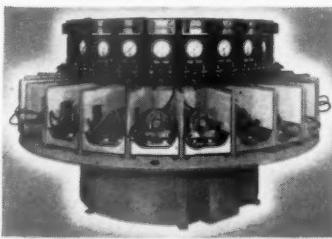
• **Who's Afraid?**—The frozen concentrate makers don't regard the chilled juice as a serious competitor. Despite Golden Gift's claims of superior quality and added convenience to the housewife, they feel that frozen concentrates have captured a good share of the consumer market, and aren't likely to lose it until—as one trade source puts it—"a better product comes along at a lower price."

HOW TO GUARANTEE

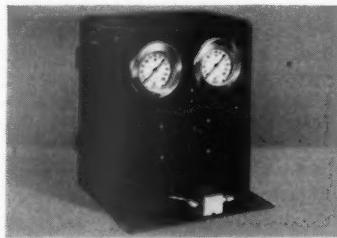
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FTC Slaps Book Publishers

In Doubleday case, the commission frowns on the two-price system—one for retailers, one for book clubs . . . Gamble-Skogmo tries new tack . . . New frozen-food plan . . . More soft drink containers . . . Another boost for stretch socks . . . Paint sales dip . . . Marketing chief for the Bell System.

A Federal Trade Commission examiner ruled this week that Doubleday & Co., Inc., cannot "fair trade" its books through retail stores and at the same time permit its own book club, The Literary Guild, to sell the same books at lower prices.

The examiner also struck down as illegal—in the four states where Doubleday owns retail stores—the agreements under which Doubleday "fair trades" its editions to retailers but exempts the Book-of-the-Month Club, Inc., from similar price-fixing agreements on the same Doubleday books when they are selected as club offers.

Another FTC charge—that since Doubleday owns retail stores, it cannot legally sign "fair trade" agreements with other retailers—was dismissed, on the basis of the recent FTC decision in the Eastman Kodak case (page 66).

Five other major publishing houses were charged with similar offenses in 1951, when the Doubleday complaint was filed. All of them—Harper & Bros.; Houghton Mifflin Co.; Little, Brown & Co.; Random House, Inc.; and Simon & Schuster, Inc.—agreed to accept the evidence in the Doubleday case as "controlling" their own cases. All the companies, however, still have the right to argue questions of law—and they may exercise this right when the examiner's ruling on Doubleday is appealed to the full commission for final decision.

The retail business is watching with interest the latest moves by the Gamble-Skogmo chain.

In rapid succession the company has: (1) made a deal to sell its stores in the Far Western states to Western Auto Supply Co., (2) announced that it wants to build its softgoods business, and (3) said that it would like to become known as "the nation's biggest discount house."

The background of these moves is not entirely clear. However, one fact does stand out: For the first 10 months of 1954, total sales of the chain ran at \$98.9-million as against \$107.5-million the year before.

Gamble-Skogmo, which has headquarters in Minneapolis, is pulling out of the seven Far Western states. If West-

ern Auto stockholders approve, Gamble-Skogmo will sell its 140 retail stores in that area, plus three wholesale houses. The price will be between \$10-million and \$12-million.

Western Auto will also pick up some 400 franchised stores under the name of Gamble-Western, which Gamble bought in 1939 from Western Auto Supply Co. of California.

B. C. Gamble, president of Gamble-Skogmo, says that his chain might re-enter the territory with dealer-owned franchised stores. But there is not much chance of a hot war developing between the two chains, which have long had close ties. Gamble-Skogmo owns about 20% of Western Auto's common stock and has a director on the Western Auto board.

Furthermore, Gamble says that his chain will pay more attention to expanding within the 19 Midwestern states where it owns 350 stores and serves another 1,800 independent affiliates. He also said that it is going to push its softgoods lines, which are a recent development for Gamble-Skogmo.

Gamble hasn't elaborated on the discount house angle as yet, except to say that the company is preparing a catalog for its stores.

A Portland (Ore.) frozen food distributor has an interesting variant of the food-freezer plan. He sells just the food, throws in the freezer for free. After 10 months in his home city, he is set to franchise his operation to other cities.

The distributor, John D. Trullinger, runs a two-pronged business. His Johnny Quick Freeze, Inc., distributes frozen foods; his National Self Service, Inc., distributes Westinghouse freezers. Here's how his plan works:

Trullinger installs a frozen food cabinet in an apartment house without charge; neither the tenants nor the landlords pay for it. Then he sells the food that keeps the cabinets busy.

He tries to bunch his apartment houses into a compact delivery area. He picks tenants who, on the basis of their rent, appear to have an income of \$7,000 or more. Each of the cabinets, with a total capacity of 12 cu. ft., is divided into four compartments. The

tenant has the key to his own compartment.

At the outset, the tenant lays in about \$15 worth of assorted frozen foods (retail value). Every week he fills out an order sheet for his next week's food, pays for the food he used the previous week. Trullinger's route man picks up the money and the order from a special compartment in the locker, and replenishes the cabinet.

The one requirement is that the customer must buy at least \$5 worth of frozen food a week; average sales run around \$7.50, says Trullinger.

Stretch stockings that carry a guarantee are the latest challenger in the fast-growing stretch-yarn market (BW Nov. 6 '54, p52).

Chadbourn Hosiery Mills, Charlotte, N. C., which pioneered women's stretch hose with its Larkwood Stocking X last summer, will start selling a second line, X-90, on Mar. 1. The price: \$5 for two pairs. The guarantee: that the two pairs will last three months—an unheard of life expectancy for sheer nylons.

Chadbourn says it developed its own process of crinkling nylon yarn, and has applied for patents on it. It has already licensed a number of throwsters—mills specializing in crinkling the yarn—and has set an immediate production goal of 500,000 pairs a week for itself. Stocking X has brought in a retail volume of some \$2-million since it started to come to the market last August, the company reports.

The company is convinced the stretch stocking—in three sizes instead of the many sizes now offered—will prove as revolutionary in women's hose as the stretch sock has been in men's. Burlington Mills, too, has brought out a woman's stretch stocking.

The packaging ferment in the soft drink industry has led to some extensive test marketing of different types of containers.

Dr. Pepper is a good instance of how complicated packaging can get when a company is trying to find out what kind of container the consumer likes.

Dr. Pepper Co.'s president, Leonard M. Green, has reported that, one place or another, you now have your choice of Dr. Pepper in these shapes and sizes:

Bottles: 6½-oz., 5¢ apiece.

Cans:

Cone-topped 6 oz., 6 for 39¢.

Cone-topped 12 oz., 6 for 59¢.

Flat-topped 12 oz., 6 for 59¢.

But that's not all. Green is going

Take a LONG LOOK at the *Land of Plenty*



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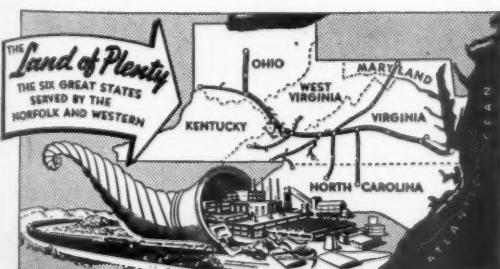
Abundance of loyal, productive manpower, both skilled and unskilled.



Plenty of natural resources . . . adequate power and industrial water.

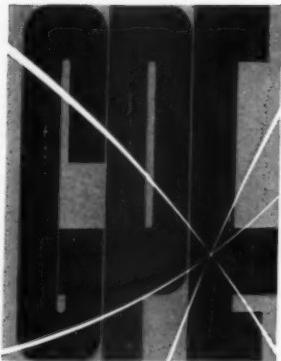


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A brochure relative to GPE Coordinated Precision Technology and the work of the GPE Companies is available. Address your request, or inquiries on specific problems, to:

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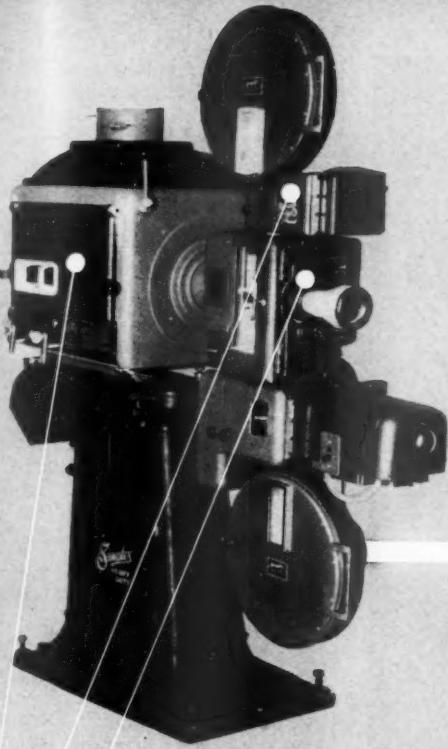


THE HERTNER ELECTRIC
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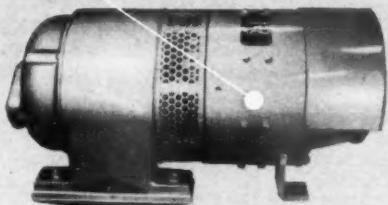
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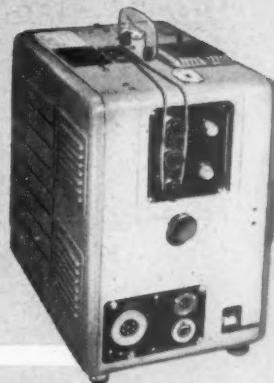


Simplex Projector, complete with stereophonic sound head, the joint development and product of International Projector and General Precision Laboratory, with carbon arc lamp by Strong Electric or McAuley; powered by Hertner Transverter or by rectifiers made by Strong.

- High intensity Carbon Arc Lamp; crater control $\pm .008"$ of exact focal point.
- Penthouse Magnetic Sound Reproducer; the essential element for multi-track-single-film projection of motion pictures with stereophonic sound, as used in the new Cinemascope technique.
- Projector Mechanism; projects 24 pictures per second, requiring movement of fragile film into position in 1/96 second and scanning of frame twice for 1/90 second each time.
- The Transverter; for motion picture arc lamp power supply, producing ripple-free, direct-current voltage output unaffected by variations in A.C. input voltage.



16 mm Sound Motion Picture Projector; possesses quality performance characteristics not previously attained; for use in small meeting halls, large auditoriums or outdoors; a product of Ampro Corporation, developed in conjunction with General Precision Laboratory Incorporated for use by the Armed Services.



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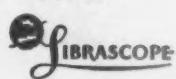
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able to "short cut" your shipping problems. That's why Emery is a big factor in the sales, production and service plans of America's leading corporations. Emery provides the BIG-4 "musts" in moving goods—control, predictability, maximum speed, 24-hour service.

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to give other bottles a whirl. In returnable bottles, he plans to test 8-oz. and 9-oz. sizes; maybe 10-oz. and 12-oz. He also has up his sleeve a 28-oz. bottle, and possibly 30-oz. and 32-oz.—for a grand total of possibly seven more bottle sizes.

As Dr. Pepper introduces the cans, bottled sales go down in some markets; in others, the bottled drinks gain from the promotion of the canned. Thus, in the Dallas-Fort Worth area, the advent of the can boosted all sales 21%, and bottles gained to the tune of 9.6%.

Green believes that local distribution of the canned drinks may be essential. Canned Dr. Pepper does better where the company has bottlers. But bottlers won't do any processing of the canned drinks; they'll serve only as distributors.

Glass Container Manufacturers Institute this week reflected the seesawing of packaging in its 1954 report. Shipments of no-deposit soft drink bottles gained 6.6% in 1954 over 1953; shipments of bottles for all beverages declined. Bottles for food packaging set a new record, though over-all glass container shipments dipped 2.8% from 1953's peak.

Paint sales were down last year through no fault of homeowners and home buyers.

The people who fixed up their own homes or who bought new homes during the year supported a sagging industry. According to the National Paint, Varnish & Lacquer Assn., sales of finishes for home use through November were running neck and neck with the year before (\$786-million).

The big sag came in the industrial finishes that are sold to other industries: auto, machinery, transportation, etc. In this category, sales were down from \$522-million in 11 months of 1953 to \$481.1-million in the same period of 1954.

American Telephone & Telegraph Co. has created a new job, that of vice-president in charge of merchandising.

The job has been created, the company notes in its announcement, "at a time when the Bell System's nine-year expansion program is catching up with the backlog of demands for service."

The first man to hold the new post is Bartlett T. Miller, most recently vice-president in charge of public relations. His new duties: "Determining market potentials for existing and new services, coordinating the merchandising plans of the operating companies with other programs of engineering, construction, production, and sales, and the conduct of market research and studies of marketing methods and techniques."

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Where easy cleaning counts



ARMCO Stainless Steel helps sell products

In pots and pans, table hollow ware, the new in-wall ovens and scores of other products that must stay bright and attractive, Armco Stainless Steel rings the sales bell with today's shoppers.

One big reason is that Armco Stainless is easy to clean. Washing with ordinary soap and water keeps it looking like new. It won't tarnish. And because it's solid stainless, there's no plating to wear off.

Armco makes more than 50 different grades of stainless. One is right for your product. Remember, too, that forty years of national advertising to millions of consumers will make the Armco label on your products a valuable selling aid.

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COMMODITIES



SYNTHETIC RUBBER: Government salesmen close a \$285-million deal; Ferris Thomas, disposal commission secretary

(standing) reports to members Leslie Rounds (left), Chmn. Holman Pettibone, Everett Cook.

How the U.S. Sells an Industry

Two bankers and a cotton broker have contracted to sell to purchasers representing some 53 companies the plants that make up the government's synthetic rubber monopoly.

They have cut up an integrated complex into smaller segments that can compete with one another, and have got a price of \$260-million for the pieces.

The three men (cover and above), who for the past 14 months have shepherded the disposal, are Chicago banker Holman Pettibone, Leslie Rounds of Kennebunkport, Me.—retired first vice-president of the Federal Reserve Bank of New York—and Memphis cotton broker Everett Cook.

As members of the Rubber Producing Facilities Disposal Commission, they sold 22 plants that make general purpose (GR-S) synthetic rubber and its raw materials, butadiene and styrene, and two that manufacture butyl rubber, which has found its major use in tire inner tubes.

The full amount the bidders will pay the government for plants, raw materials, and supplies will be \$285.5-million. Besides the sale price of the plants, the government will take in some \$25-million for its rubber inventories and a few other assets. When you add in the \$91-million cash balance of the Federal Facilities Corp., present rubber plant operator, the total return

to the government will be just over \$401-million.

• **Surprise**—But the real surprise was in the bare contract price for the 24 plants—\$260-million. Some rubber industry observers had thought the plants wouldn't cost them much over \$100-million.

Though the contract price is below what such Congressional rubber experts as the late Paul W. Shafer had first considered a full, fair value, it is amazingly close to two benchmarks for plant value. The contract prices (less current assets) represent 96.6% of the total unrecovered synthetic rubber investment of the federal government, and 99.2% of the plants' replacement cost, as figured on the basis of an independent engineering appraisal conducted by the Ralph M. Parsons Co.

• **Standards**—When Congress authorized rubber disposal, it set full, fair value as a major standard. Three other criteria were also established: (1) that the sale pattern foster a competitive industry, (2) that adequate supplies be available to small rubber users, and (3) that enough capacity be kept operating to take care of any future war needs.

There's no question that there will be enough rubber for small users, and that capacity for mobilization needs will be maintained. And since Atty. Gen. Herbert Brownell, Jr. has given his

written clearance on the antitrust implications of the program in the light of Congressional intent, there should be no substantial trouble involved in getting Congress to approve the disposal package.

• **Congress**—House or Senate each has through Mar. 25 to object either to the entire sale program or to any individual bid. If either house vetoes any individual sale, any or all other purchasers may withdraw. If in that case less than 500,000 long tons of GR-S capacity or 53,000 long tons of butyl would be sold, all sales would automatically be voided, and the government would retain the industry.

Not all Washington observers will go so far as one Rubber Disposal Commission spokesman, who predicted: "The plants are as good as sold—if only the country doesn't get into war in the next few weeks." But few legislators—except for the fringe of liberal Democrats—are expected to raise objections.

• **Growth**—The industry that the government is now selling off was a wartime product. It really got its start in 1942, after the Japanese cut off U.S. supplies of natural rubber from the Far East. The government pushed construction of plants to make styrene and butadiene (which had been virtually laboratory curiosities); their end product, GR-S rubber; and plants to make



*\$3,500 for a spot on the new draperies...

The scene: A modern textile factory. Giant looms roar lustily, eating up miles of brilliant yarn, producing miles of beautiful new fabrics. In every loom, moving parts speed in a blur, faster than the eye can follow—and therein lies a story. For to lubricate those flying parts is a ticklish business.

On a single loom in a southern mill, for example, high speed gears overheated. The machine had to be stopped for lubrication, which was costly. But even worse, old-style lubrication resulted in stained fabric, no matter how careful the oiler was. Cost: Product spoilage over \$3,500.00 a year—on just one loom.

Then an Alemite lubrication expert was called in. He studied the problem, came up with a simple answer. An automatic Alemite system was installed at low cost and a minimum of trouble. The installation was made after hours, so no machine time was lost. The new system, a miser on lubricant, metered the proper amount of oil constantly. No time lost for lubrication—and NO more fabric ruined by oil stains.

This is typical of the assistance Alemite offers industry. Whatever you manufacture, whether your plant is large or small, chances are an Alemite system or Alemite equipment can save you money. And expert lubrication counsel is yours at no cost or obligation whatsoever. Wherever you are, there is an Alemite representative ready to serve you.



Here, an Alemite loader pump is being used to fill a grease gun. The saving over hand methods is 15 man hours for every 400 pound drum of lubricant used. Further, only clean lubricant reaches bearings, maintenance costs go down, and house-keeping is easier.

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The coupon below will bring you an interesting booklet, "5 Plans for Better Plant Lubrication." Send for it. And a phone call will bring an Alemite expert, who will be glad to give you an "on-the-spot" demonstration of how Alemite methods can save you money.

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plant-location news



What transportation facts do you need?

Recently, a container manufacturer using our Industrial Location Service to help select the right spot for his new plant, sent in this request: "We've got to be located where we can supply all areas of our market within 36 hours at a cost that will let us compete for new business." As in many other businesses, the transportation costs and schedules involved could make or break his proposed operation. But ILS found the perfect location—fast.

Here are some of the reasons why. ILS is the one organization that can give complete, up-to-the-minute facts on transportation costs, schedules, and facilities. Whether your business calls for assembling heavy or bulky water-borne materials, or for the use of air transport to get there "fastest with the modest," ILS can give you all the facts—secured firsthand from dozens of carriers.

We even maintain a Washington office to help in transportation problems. From this listening post we get current reports on tariffs, regulations, and schedules...and all of this information is included in our free transportation reports. To get one of these studies for your needs, all you do is contact ILS.

We fill in the picture, too

But this isn't the only type of transportation data ILS supplies. For one specialty-goods manufacturer we did all this: located sites with suitable warehouses for ceramic bodies, and within a short distance of LCL terminals. Even more important, we found him available sites with private railroad sidings.

For every suggested location, ILS also prepared rates for assembling materials and distributing finished goods to given points. Supplied comparative rates for air, rail, water, and highway, too.

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Director, Industrial Location Service

such other rubbers as butyl for tubes and oil-resistant neoprene.

At the end of the war, several plants, including the neoprene plant and four of the five styrene units, were sold, leaving 27 major plants still in government control. These are the plants that were on the sale block.

• **Unsold**—All the plants but three were sold (see table and map on pages 100-101). One of these is the copolymer plant at Baytown, Tex., operated by General Tire & Rubber Co., fifth ranking company in the rubber industry. General was the only bidder for the plant, but did not get it, and under the terms of the disposal law the plant must now go into mothballs. This was the only desirable plant not sold because the bid was too low.

I. The Antitrust Issue

Some of the sales highlight the competitive problems involved in the industry setup—to all of which Atty. Gen. Brownell has given his clearance. But though approving sale, he is clearly apprehensive as to future competition.

In Los Angeles, Shell Chemical Co., which had operated a butadiene plant, will now own an integrated butadiene, styrene, and copolymer complex.

• **Butyl**—On butyl rubber, the only bidders were the operators of the two plants—Humble Oil & Refining Co., and Esso Standard Oil. The competitive problem here arises from the fact that both are Jersey Standard companies.

The Attorney General finally approved the sale for two reasons: (1) because Jersey Standard offered to resell, under some limited conditions, the plant at Baton Rouge to any prospective purchaser; and (2) because Standard has offered patent licenses and knowhow to companies outside the Jersey family.

• **Port Neches**—Another special antitrust worry was the butadiene plant at Port Neches. This single unit accounts for 32% of the U. S. capacity. It went jointly to Goodrich-Gulf Chemicals and Texas-U. S. Chemicals. Each half of this combination is a rubber-oil company teamup, and each also gets an adjoining GR-S plant. This sale was approved only because Goodrich-Gulf and Texas-U. S. gave assurances they would separately acquire raw materials and independently market butadiene.

II. Closing the Sales

It has taken well over a year to negotiate the sales. The commission—when finally named—called for bids on Nov. 18, 1953, giving companies until May 26, 1954, to submit bids. It then spent seven months negotiating with them.

• **Unusual**—The negotiations were unusual, to say the least. Rather than taking its target price from such arbitrary figures as total cost or depreciated book value, the commission asked each bidder to tell what figures it had used in arriving at its estimate. Eugene Holland, executive director of the commission, says, "We asked them to include every single possible factor that goes into the expense of running a business."

The commission, during many months of discussions, did not tell bidders what it considered a fair price. Said one negotiator, "All Gene Holland would say was that we were doing our figuring wrong, that our price was much too low."

• **Windup**—Finally, in the beginning of last November, with the Dec. 27 deadline for signing a contract in sight, negotiators were told that their bids were "X-dollars" below an acceptable price.

The first informal understandings came a few days later (BW-Nov. 27 '54, p.32). One unsuccessful bidder figures that if the commission had set a minimum price earlier, it could have wrapped up its work before it did.

III. The Transfer of Plants

Assuming that Congress does not disapprove the sale, the commission has 60 days to close contracts. It hopes to make the transfer as soon as it can. Target date is Apr. 30, with closings to be completed over a week's time.

• **Few Interruptions**—The commission feels that most plants—perhaps all—won't have to be shut down for the transfer. Of course there should be no real worries over actual operating changeover where a present government contractor becomes the new owner. And that's true in 16 of the 24 plants sold. Of the rest, only three plants will be under completely new management. So while there will be some individual problems, there won't be any general interruption of synthetic production.

And in some cases where there are changes—as with the butadiene plant at Houston—employees will get a chance to stay with the new owner, in this case, Food Machinery & Chemical Corp.

• **Inventories**—The rubber inventories now held by the government should make no major difficulties.

The disposal law gives the Federal Facilities Corp., which has operated the plants for the government, a year to sell its inventories on a prorata basis to new plant owners. FFC, however, hopes to dispose of them a good deal sooner. Plant purchasers will have a chance to buy whatever types they feel they will need to supply customers.

To see how the industry will look when it gets into private hands, turn to page 100.

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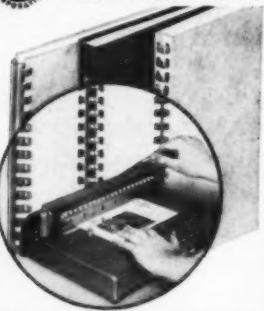
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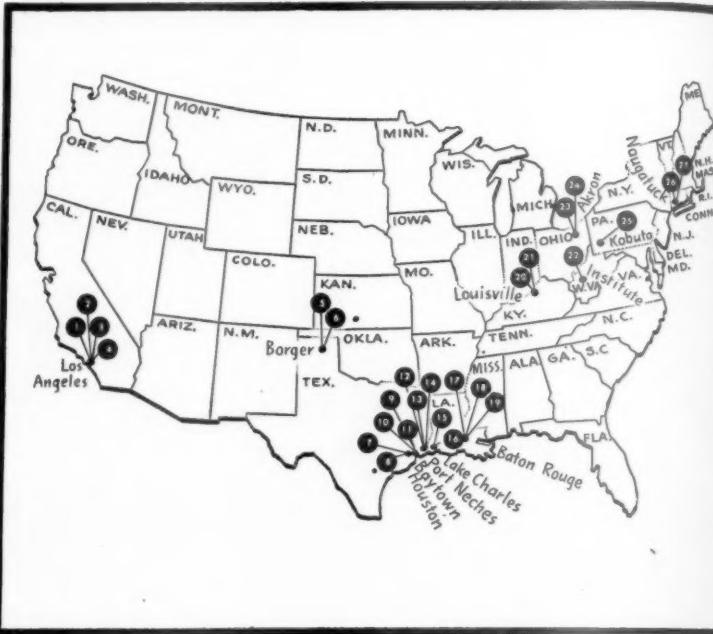
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Synthetic Rubber plants

Here's where the plants are



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An Industry Gets Set for

A few months from now, barring unexpected Congressional snags, the plants marked off on the map above and listed at the right will make up the producing facilities of the country's newest private industry—synthetic rubber.

There are still some unanswered questions as to how the infant will behave when freed of the parental shackles after 12 years of government monopoly. Washington, in arranging and negotiating the sale (story on page 96), has laid down strict rules—but, like most parents, still has a few worries. Whatever Washington's qualms may be, the industry itself has no doubt on one point—that a stiff competitive battle lies ahead.

Looked at from the angle of the private companies that will take over, the pattern shapes up something like this:

- A hotter race between synthetic

rubber (GR-S) and the natural product for the "middle ground"—the share of the market (estimated at about 35% in the U.S.) in which neither type gets special preference for technical reasons.

• For 1955, at least, retention by synthetic of a price advantage over natural. Natural took a jump early this week and was hovering around 34¢ per lb.—some 11¢ per lb. higher than the government-set synthetic price. The ultimate price for synthetic will be set by competition, but present indications are for a slight rise (private industry has taxes to pay, for one thing) but not a big one. At least one company (Phillips Chemical) is already offering nonpremium grades of GR-S at a base delivered price of approximately 25¢ per lb. (contingent, of course, on final approval of the plant sale). The present government price is 24.1¢ delivered, including 23¢ for rubber and

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Plants: Going Into Private Hands

Here's who is buying them from the government

PLANT	BUYER	PRODUCT	ANNUAL CAPACITY IN TONS	SALE PRICE
1. Standard Oil of California		butadiene	(†)	\$1,159,000
2. Shell Chemical		butadiene	61,000	—
3. Shell Chemical		styrene	57,000	30,000,000
4. Shell Chemical		GR-S	89,000*	—
5. Phillips Chemical		butadiene	71,200	19,100,000
6. Phillips Chemical		GR-S	66,000*	4,525,000
7. Food Machinery & Chemical		butadiene	78,000	24,187,000
Tennessee Gas Transmission				
8. Goodyear Synthetic Rubber		GR-S	99,600*	11,889,000
9. Humble Oil		butyl	43,000*	17,500,000
10. Humble Oil		butadiene	49,000	8,886,000
11. Not sold		GR-S	44,000*	—
12. Texas-U.S. Chemical		butadiene	197,000	53,000,000
Goodrich-Gulf Chemical				
13. Texas-U.S. Chemical		GR-S	89,400*	11,500,000
14. Goodrich-Gulf Chemical		GR-S	90,000*	13,000,000
15. Petroleum Chemicals, Inc.		butadiene	60,000	16,000,000
16. Firestone Tire		GR-S	99,600*	11,650,000
17. Esso Standard		butyl	47,000*	14,857,000
18. Copolymer Corp.		butadiene	23,000	5,000,000
19. Copolymer Corp.		GR-S	49,000*	5,000,000
20. American Synthetic Rubber Corp.		GR-S	44,000*	2,340,000
21. Not sold		butadiene (alcohol)	87,000	—
22. Not sold		GR-S	122,000*	—
23. Firestone Tire		specialty GR-S	30,000*	2,250,000
24. Goodyear Synthetic Rubber		specialty GR-S	15,200*	2,075,000
25. Koppers Co.		butadiene (alcohol)	128,000	2,000,000
26. U. S. Rubber		specialty GR-S	22,200*	3,200,000
27. U. S. Rubber		dodecyl mercaptan	1,700	60,000

(†) Produces crude butadiene that is purified by Shell Chemical butadiene plant and is included in Shell's tonnage

*Long tons (2,240 lb.)

for a New, Competitive Market

1.1¢ for freight. On the other side, Malayan producers don't expect the price of natural to get down to "rough alignment" with synthetic before 1956.

- Development of the private synthetic industry pretty much along lines of growth to date. That is, with rubber companies for the most part owning the copolymer plants making GR-S, the synthetic rubber used in tires; and, in general, oil companies and their chemical affiliates producing butadiene (used in making GR-S and also in chemical products) and butyl rubber (used for tubes), both of which are oil byproducts.

- No big burst of new technology or new manufacturing processes.

- Long-range, tougher going for natural rubber. Competition is bound to spur more research on synthetic for competitive advantage in product, price, new uses. And a rubber manufacturer

owning a synthetic plant is likely to use his own product as far as possible in preference to natural.

I. Rubber, Oil, Chemicals

The intermixture of oil and chemical companies in the rubber business is a far cry from prewar days, when rubber meant mainly the imported natural variety, and the rubber companies made tires and rubber products, and that was about the story.

But synthetic rubber is a bit more complicated; what brings oil and chemicals into the business is the three-way setup—the three distinct kinds of operation and three main types of plants involved.

- Butyl—The butyl plants (two are on the government sale list) produce a finished product from a byproduct of oil refining. At one point along the

catalytic cracking scale, butanes and butylenes come off, and these can be converted to butyl rubber. Butyl isn't much good in tires—but it's the stuff that makes very good inner tubes. The new tubeless tires of three of the big rubber companies also have a butyl inner liner (BW-Aug. 28'54, p60).

Production of butyl is a normal operation for an oil company, and will remain so.

- Butadiene and Styrene—Second kind of plant makes materials that go into GR-S. One of these, butadiene, is a basic organic chemical whose uses are not limited to synthetic rubber, though about 80% of production now goes to plants making GR-S. It's also used as a basic "building block" in producing a number of chemical products, such as alcohols and ketones, and in certain plastics.

Just as with butyl, production of

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butadiene is a normal function of the oil business. And it is mainly the oil companies—or their chemical affiliates—that have bid for the butadiene plants.

In butadiene, there's only one completely new setup—Food Machinery & Chemical Corp. and Tennessee Gas Transmission at the Houston plant, for which they outbid Allied Chemical & Dye, Goodrich-Gulf Chemicals, Goodyear, W. R. Grace, and the plant's present operator, Sinclair Rubber.

As for styrene, only one plant making it is involved in the sale—the Los Angeles plant that has been operated by Dow Chemical Co. for the government but was bid in at the sale by Shell Chemical Corp. However, Dow will continue to be a major producer of styrene in other plants it owns.

• **Copolymer**—It's the third kind of plants, the copolymer plants, that turn out the principal synthetic rubber, GR-S, using butadiene and styrene as materials.

The making of GR-S is primarily a rubber company function—and it will remain so. Tire companies, which have been buying 56% to 58% of the rubber the government has sold, have latched onto plants that make 65% of the output. But such non-rubber-consumers as Phillips Chemical and Shell Chemical (both affiliates of oil companies) are also in the picture, and will be aggressive sellers in the synthetic rubber market. Phillips, however, was already operator of the plant it is buying.

As it works out, each of the big four rubber companies (Goodrich, Goodyear, Firestone, U.S. Rubber) has at least an interest in a GR-S plant, though Gulf Oil has teamed up with Goodrich, and Texas Co. with U.S. Rubber.

II. Changeover

The industry, like the government, looks for a smooth transfer of ownership, with few interruptions of production.

Some adjustments will have to be made, of course. The government offers today 77 different types of synthetic rubber.

Obviously, no corporate buyer will attempt to make that many. What's likely to happen is that the new owners will work out among themselves the various types each will make. (At present, the government can order a certain plant to make certain types, then shift to other types.)

• **New Methods**—On one rumored change, the companies come back with a resounding "No." That's the question whether there isn't a new technological outburst due once the private companies take over—a sudden outpour-



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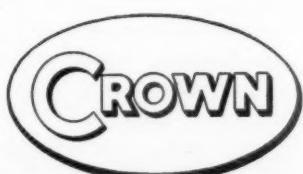
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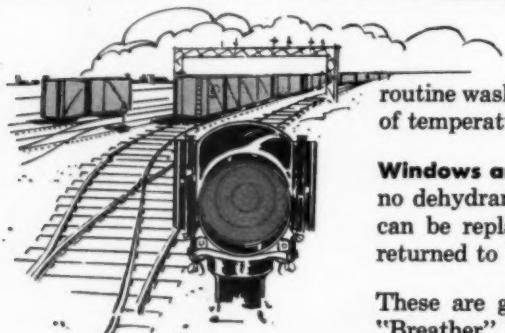
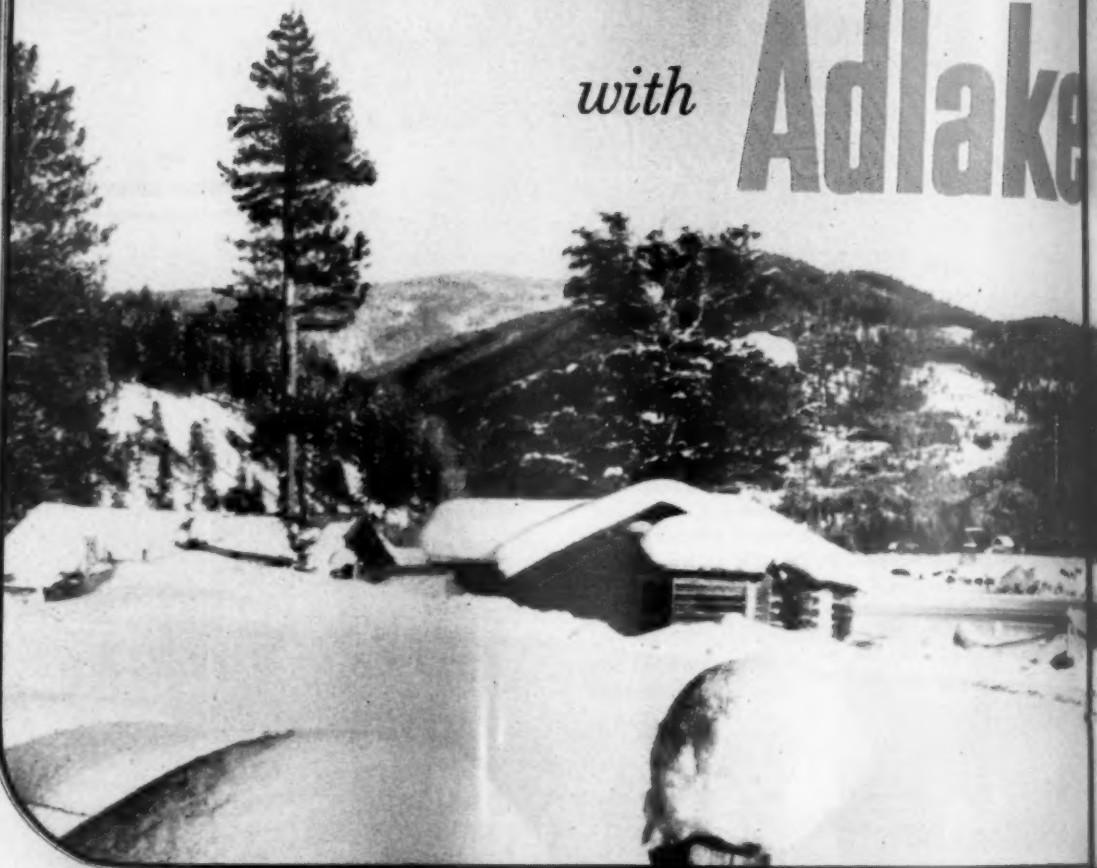
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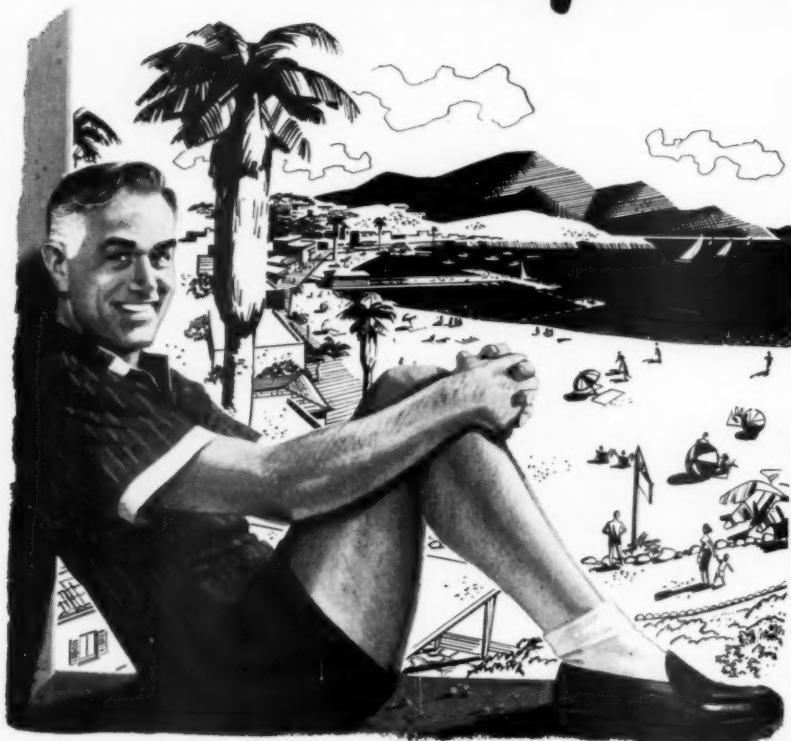
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ing of technological innovations kept on the shelf waiting for the shift.

Under the government setup, major companies as well as universities and others have done research, for a government fee, on various phases of synthetic, with the findings going into a pool in Washington, available to all plant operators. But industry men say no new techniques have been held back—even under government ownership it would be bad business for a plant operator to do that. And, they ask, if a company had a radical change in techniques up its sleeve, why would it buy a plant geared to present methods?

• **Capacity**—The failure to sell two copolymer plants (at Baytown, Tex., and Institute, W. Va.) means reduction in total GR-S capacity (the two have a total annual capacity of 166,000 tons). But capacity of the copolymer plants sold to private owners totals some 690,000 tons a year—exceeding the estimated synthetic consumption of 630,000 tons in the U.S. in 1954.

The industry figures that all copolymer plant capacity ratings can be increased by 12½% by using the oil-extended process—in which adding a particular petroleum oil to the butadiene and styrene during the process increases the quantity of the product. This process is now being used in some plants, but others are not yet equipped for it.

III. Synthetic vs. Natural

The eventual price level of the synthetic product under private ownership is one of the big unanswered questions—and obviously the price relationship of synthetic and natural is one of the prime factors in determining whether synthetic producers can cut themselves a bigger slice of the market that now goes to natural rubber.

For the near term, Phillips Chemical's offering price of approximately 25¢ per lb. on non-premium synthetic grades is in line with the price estimate of most industry men. Their figure runs between 24¢ and 25¢ per lb. But that's only for the near term; they don't go beyond that.

• **Slices**—As of now, natural and synthetic are running about neck and neck in the U.S. market. The U.S. industry uses about 1,200,000 long tons of rubber a year. Of the tire and tube market, natural gets about 49½%, and synthetic the other 50½%. The Natural Rubber Bureau estimates over-all U.S. consumption in 1954 at 630,000 tons of synthetic, 600,000 tons of natural.

Competition between the two types of rubber is limited pretty much to the "middle ground" in the market. In the tire market, both are used; and one

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tire may contain several kinds of rubber, both natural and synthetic. But in certain uses, such as truck and airplane tires, certain mechanical goods, some drug sundries, natural rubber is preferred, regardless of price. Dr. J. N. Street, Firestone's director of research laboratories, puts this at 27% of the market. For other uses—passenger tire treads, other mechanical goods, wire insulation—preference goes to synthetic (38% of the market, according to Street). Street puts the middle ground, where choice depends on price and availability, at 35% of the market.

• **Unworried**—With synthetic's present price advantage, and with aggressively competitive businessmen taking over in the synthetic field, producers of natural rubber might well be a bit jittery. Phillips Chemical's announcement of its 25¢ price did give Malayan rubber men something of a shock. But in Singapore, they say, nobody in the rubber business ever looks more than three months into the future, and the mood of Malayan rubber men is, "Nobody's really worried yet; we see the handwriting on the wall, but we know we've got plenty of time." The Malayan trade remains convinced that its competitive position won't be affected for a minimum of six months, probably not for a year.

There are reasons for Singapore's undiminished optimism besides this boom-bust psychology, however.

• The Malayan trade relies on the market area where natural is a must.

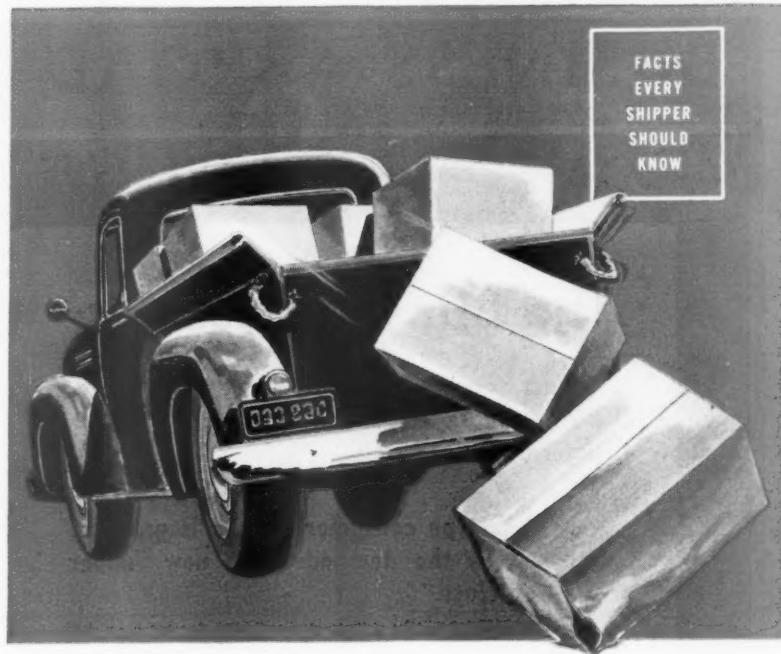
• Good plantations—not the best—can produce at a cost of 15¢ (U.S.) per lb., might be able to do it under optimum conditions at 10¢; natural rubber men feel these costs give them good insurance, and they are confident the U.S. synthetic price won't go below 25¢.

• World consumption grows faster than production.

• Malaya counts on high U.S. auto production in first-half 1955.

• **Tougher**—Farsighted members of the Malayan natural rubber fraternity, however, see the price of synthetic putting a ceiling on natural's price within two years. They see the days of enormous profits numbered for the natural rubber men, who right now are eating high on the hog.

But that's not the only reason for expecting a tougher time for natural rubber in the years ahead. The big reason is this: Government ownership has been a discouraging factor in technological research on synthetic, because the government hasn't particularly encouraged fundamental research as such. With competitive forces at work, however, there's likely to be a spurt of research that will give synthetic a lead both in price and quality.



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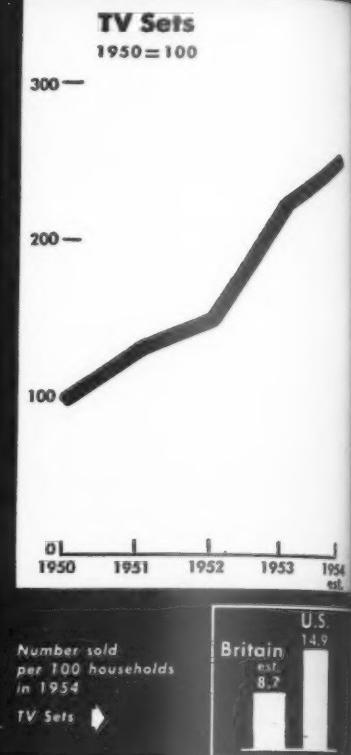
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Sparking the change is the postwar rise of an "upper working class" with real money to spend. In response to the demands of this group, you are getting a distribution system geared, as ours is, to a one-class mass market. Installment credit, too, is on the rise in Britain, though it still plays a far smaller role than here.

• **Best Year**—Just how far-reaching this development is showed up last year, when Britain celebrated the most prosperous year in its history.

As 1954 ended, preliminary figures showed that everything went up—employment, production, exports, and personal consumption. However, as more detailed statistics become available, it is clear that the most significant thing about the British economy in 1954 was

the spurt in consumption, especially in consumer durables.

I. Opportunity Knocks

Many U. S. companies stand to gain from this development. There are many U. S. manufacturers involved in producing consumer goods in Britain, through branch plants, subsidiaries, or associated companies. Among the leaders in consumer durables are Hoover, Bendix, General Motors' Frigidaire; and in autos, Ford and General Motors (Vauxhall). If and when the pound becomes freely convertible into dollars, and quotas against dollar imports are lifted, there will be an opportunity for American exporters of a variety of consumer items to edge in on the growing mass market.

• **On the Home Front**—British companies, and the British economy, stand to gain most, of course. Up to now, Britain has lagged far behind the U. S. in the consumption both of autos and household goods, and its industry has in most cases been correspondingly small in these fields. (In foods, alcohol, tobacco, services, and recreation British consumption has compared quite favorably with ours.) But it isn't just the

British industries that produce consumer durables that should benefit. As more and more workers want these goods, and buy them on the installment plan, there should be more incentive to high productivity in industry generally.

In 1954, total retail sales were 5% higher than in 1953—with electric appliances, including radio and TV sets, up 15%; furniture and furnishings 11%; clothing 10%; and food 3%.

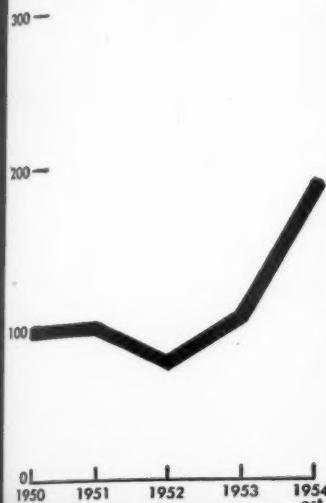
According to late estimates, TV sales reached a peak in 1954 (1.3-million), as did vacuum cleaners (850,000), refrigerators (300,000), and electric washing machines (600,000). Sales of all four climbed especially fast in the second half of the year, helped by the lifting of restrictions on consumer credit in June. Christmas sales of washing machines, for example, were double that of the previous year.

Other durables in big demand included radios, record players, pressure cookers, and two peculiarly British items—continuous coal fire burners (gradually replacing the old open-grate fire) and electric heaters. Sales of motorized garden equipment and of do-it-yourself tools went up substantially.

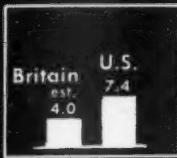
• **More Autos**—Auto sales in Britain also rose—from 281,000 in 1953 to

Washing Machines

1950 = 100

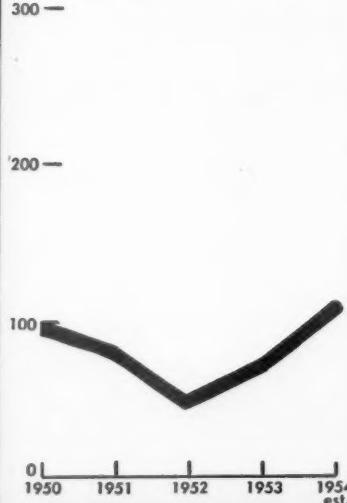


U.S.
4.9
Number sold
per 100 households
in 1954
Washing Machines



Vacuum Cleaners

1950 = 100

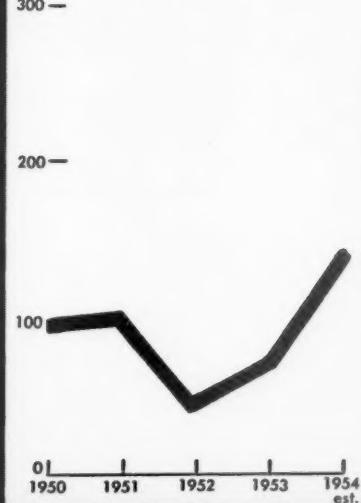


U.S.
5.5
Number sold
per 100 households
in 1954
Vacuum Cleaners



Refrigerators

1950 = 100



U.S.
6.7
Number sold
per 100 households
in 1954
Refrigerators



I a New One-Class Market

403,000 last year. But the 1954 figures give no real clue to the size of the domestic car market. Exports still come first, with a high purchase tax and compulsory export allocations putting a serious crimp in domestic sales. Still, you can see what the British auto industry thinks of its future in the home market from its plans to boost total output by 50% in the next five years, with most of the increase slated for domestic sales.

By American standards, consumption per capita of consumer durables, except vacuum cleaners and TV sets, is still pretty low. That's not surprising when you consider that: (1) before 1939 Britain was far behind the U.S. in durable goods consumption; and (2) it was the second half of 1954 before consumers could buy freely and get unrestricted installment credit. (They still pay a hefty purchase tax.) Until last year, the austerity regime—rationing and controls plus compulsory export—checked the market. Even now, you have to wait six to nine months for a new, small car.

II. Income Levels Change

The development of a British mass market for durables is still at too early

a stage to tell whether or not British consumption of durables in the next few years is likely to reach American levels.

There's no doubt, though, that it is moving in that direction. It is getting a strong impetus from changing income levels, changing social patterns, changing tastes, and changing methods of distribution.

In the case of incomes, you have had a number of significant changes in the past generation:

- Total personal incomes, before taxes, more than trebled between 1931 and 1951—with total real income rising slightly over 25%, and real income per capita by 17%. The rise was steepest after 1945.

- In 1938-39, about 32% of all personal income after direct taxes went to the top 10% of the income earners. By 1950-51, only 20% of income went to this group.

- More people earn incomes in Britain today than ever before. Unemployment has virtually disappeared. What's more, 32% of "working class" households have two wage earners, and another 16% have three or more.

- There has been a shift as between classes. The middle class has

much less than prewar, the working class much more.

- The "welfare state" that was initiated by the Labor Party and maintained by the Conservatives has had a profound effect. In 1931, the proportion of total income spent on necessities—food, housing, lighting, heating, clothing—was 42½%; by 1951, it had dropped to 37%. And averages don't tell the whole story. In large industrial areas, rent control for old dwellings and subsidies for new ones (available only to workers) keep the proportion of average taxed earnings needed for rent down to 3% to 5%, against 8% to 10% prewar. Thus a larger slice of a larger real income is available for spending on nonessentials.

These changes, along with others, have produced an "upper working class" in Britain. Typical weekly earnings in this group are \$35 to \$50, with family incomes often \$60 to \$90—not a lot by American standards, but pretty terrific by British. It's the rise of this class to comparative prosperity that is the chief factor in the consumer revolution just starting in Britain.

III. Upgraded Tastes

Taste in most consumer goods today is being set in Britain by this new class. According to the Manchester Guardian, "Working people are no longer content

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See Proof of Cosco's Greater Value!				
Features	Cosco 15-S	Brand B	Brand C	Brand D
5 posture adjustments including spring back	Yes	Yes	Yes	Yes
Formed base construction	Yes	Yes	Yes	Yes
2" rubber wheel casters, double race ball bearing	Yes	Yes	Yes	Yes
Saddle shaped seat—with foam rubber cushion	Yes	No	Yes	No
Steel curved padded back	Yes	Yes	Yes	Yes
Bonderized baked on enamel finish—vinyl coated fabric	Yes	Yes	Yes	Yes
Zone 1 price—(add approx. \$2 for Zone 2)	32.50	65.00	49.75	49.50

*\$31.50 in Texas and 11 Western States
(Zone 2). Other models also available.

COSCO Office Chairs

BETTER SEATING MEANS BETTER WORK

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to be fobbed off with cheap imitations of the goods supplied to their betters. The working class now includes a large prosperous section of people with family incomes that leave a good margin for spending after the necessities have been paid for. These are the people setting the pace. They want good merchandise suited to their own ideas."

It's this group that buys most of the TV sets in Britain today. To meet its demand, industry is now producing them at a "mass price." Only three years ago a good average set cost \$250 without the purchase tax. Today it costs \$150 (plus a purchase tax of about \$33) and has a much larger screen and better reception. (The British have taken TV seriously only since the 1953 Coronation.)

• **One-Class Brands**—Since 1945 one-class brands have developed in other lines. Prewar baby carriages used to vary in price from \$15 to \$150. Now one mass-produced type costing about \$55 has pushed out most of the models that sell either below or above this price. Most electrical appliances have been put on a one-class basis—electric stoves, washing machines, refrigerators, irons, kettles, radios, and TV sets.

Readymade men's suits, with little range in price or quality, now dominate the British market. The famous English custom tailors serve a steadily shrinking minority. Household items such as sheets and towels have followed the same pattern.

But there's a limit on the ability of the upper working class to buy consumer durables. While its members have good incomes by British standards, they have little or no capital. And until June, 1954, installment credit, which supplies the capital, was strictly limited. That's why it's hard to tell yet just how big the demand from this group will grow.

• **No-Servant Problem**—The British middle class, of course, is increasingly interested in consumer durables now that it is almost without domestic servants. In 1921, there were about 1.1 million resident domestic servants in Britain and the same number of non-residents. By 1952, the numbers had shrunk to 140,000 and 206,000.

This has led the average middle class housewife, who used to turn up her nose at "American gadgets," to take a real interest in home appliances. But the change in the servant situation is only about 15 years old, and during most of this period it has been impossible to buy labor-saving home appliances. So it's hard as yet to gauge the demand from this quarter.

IV. Installment Plan

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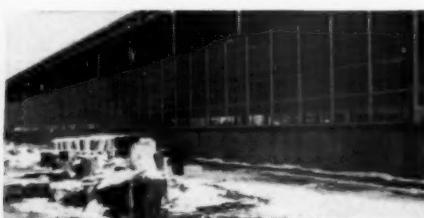
For complete information, contact your local Fenestra® representative. He's listed in the yellow pages of your phone book. Or write for our free booklet on Fenestra Super Hot-Dip Galvanizing and Bonderizing. Detroit Steel Products Co., Dept. BW-1, 3425 Griffin Street, Detroit 11, Mich.

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"... 1954 total installment credit . . . was just under \$1-billion . . ."

STORY starts on p. 108

will necessarily carbon copy the present mass distribution system in the U.S. But you can see a similar pattern shaping up in some of the basic areas.

Take consumer credit, which is known in Britain as "Hire Purchase." There are nearly 50 Hire Purchase (HP) companies in Britain, including six big ones. All are members of the Hire Purchase Traders Assn. In addition, many small outfits have gone into business recently to finance individual stores. The biggest single source of installment credit in Britain is the United Dominions Trust, a \$100-million group that specializes in long-term credit for industry as well as in HP.

Though no precise figures are available, it's a safe guess that by the end of 1954 total installment credit outstanding in Britain was £350-million (just under \$1-billion). This compares with \$21.5-billion of installment credit in the U.S. at about the same time—though total consumer expenditures in the U.S. were less than eight times as great as they were in Britain.

Still, there was a sharp rise in the use of HP in Britain after restrictions were lifted last June. By the end of the year, the total was 40% higher than in 1953. And there's no doubt it helped sales of cars and durables like TV sets. New cars sold on HP rose from 26,000 in 1953 to 53,000 in 1954, used cars from 168,000 to 253,000. In 1953, about 50% of TV sets were sold on HP; by late 1954, nearly 66% were selling that way.

V. New Retailing Methods

During the year, there was also an advance in modern packaging methods, though British standards are still behind American. Strangely enough, British observers don't associate these changes with advances in advertising technique, which seems to have remained about where it was in the 1930s. One reason is that Britain has no radio commercials, and commercial TV won't start for about another year.

There have been at least two important developments in retailing methods.

On the one hand, there's been a big increase in the business of mail order houses. This has come mainly through the drive of Isaac Wolfson of Great Universal Stores, Ltd. (BW-Dec. 11 '54, p. 27). There are no over-all figures for mail order business, but you get some measure of its expansion from the

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Q. Could chemical science create a technique to measure mold erosion that would guide development of less abrasive, mold-saving plastics compounds?

A. ATOMIC TRACERS MEASURE MOLD WEAR!



General Electric presents another peacetime use for atomic energy—a radioactive tracer technique that now makes possible accurate scientific measurement of mold erosion in the plastics industry. This technique can detect one part of metal in twenty million parts of plastics compound.

This has already led to development of new phenolic molding compounds which greatly reduce erosion of molds. Now, these expensive metal molds—particularly for larger parts such as television and air-conditioner cabinets—last longer, require repolishing less frequently. The result is a substantial saving, both of time and money.

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way C. U. S. profits have shot up. This company's trading profits after tax were only about £1-million in 1945; but by 1950 they had reached almost £6-million, and in 1953-54 almost £15-million. At the same time, department store chains like Marks & Spencer, Ltd., (BW-Jun.13'53,p50) had been expanding their business.

Second, self-service markets are spreading fast in Britain, but as yet there are no supermarkets of the latest American type. Now that building restrictions are pretty well off, however, there may be something developing along this line.

VI. New Design for Living

There are two long-term trends affecting the consumer market in Britain, just as they have in the U.S. during recent years—the growth of suburbs and the growth of leisure.

Suburbanization is actually older in Britain than in the U.S. It got started in a big way in the 1930s, especially in the London area. The very large cities in Britain have shrunk in size. Those with over 1-million people in 1931 had lost more than 18% by 1951. In the earlier years there were 113 towns with more than 50,000 population; by 1951 the number was 156. Just as in the U.S., this has been one of the factors in new demands for household durables, gardening equipment, and automobiles.

• **Shorter Week**—Contrary to the general belief here, the British worker puts in just as long hours as he did before the war—about 47 hours a week, with occasional overtime. But the 47 hours are usually crammed into a five-day week or at most a 5½-day week. This gives the British worker more free time on weekends and he takes advantage of it not only with football games or dog racing, but also with his garden. It's estimated that over 20-million Britons are gardeners. (Sales of the two leading gardening magazines have doubled since prewar.)

The British worker still doesn't spend anything like the amount of time in a motor car that his American counterpart does—and probably never will simply because of the space factor. But a recent survey shows that even in 1953 over 25% of all cars were owned by skilled workers. The proportion was probably higher in 1954, and rising fast. Coal miners and well-paid industrial workers buy small cars on HP, pay off their installments by taking two or three of their co-workers to the job at a price. Car parks at new coal pits and new factories are now common in Britain, and most of them are already overcrowded. Certainly the British auto industry is counting on bigger and bigger sales to the worker.

How to Live Next to Russia

That's the eternal problem faced by Finland. Co-existence is a downright necessity—a way of life. So far, the Finns have made a go of it.

To most Western democracies, co-existence with the Communist nations is a political choice. But to the Finnish democracy, coexistence is a way of life. It's the only way by which some 5-million Finns can continue to lead an independent existence alongside their huge Russian neighbor.

Coexistence for the Finns isn't easy. This week in Moscow, for example, Finnish negotiators had a rough time setting up this year's quotas in the Russo-Finnish trade pact. This is in direct contrast to relatively easy-going negotiations with the World Bank for a \$12-million development loan, about to go through in Washington.

• **A Go**—But so far, the Finns seem to have made a go of their predicament. They have:

- Rebuilt their country after the rigors of two wars with the Russians. They have even diversified their industry and rebuilt their economy while paying off a staggering \$600-million in reparations to Moscow.

- Reduced their swollen trade with the Communist bloc and increased their trade with the West.

- Maintained their democratic institutions, even though their present parliamentary government coalition is shaky.

- **Bitter Peace**—By the Treaty of Paris in 1945, Helsinki signed a bitter peace with its Communist neighbor: It gave up 12% of its territory bordering Russia; it had to resettle 15% of the population. It lost valuable nickel mines in the north along with the port of Petsamo, Finland's second largest city.

Between 1945 and 1952, the Russians remorselessly ground out of the country \$600-million in goods as reparations, forcing the Finns to build new industries to supply them. These demands set up high-cost shipbuilding and metalworking industries.

When the reparations were paid off in 1952, the Finns looked around for customers. It was soon obvious that Finland could not compete with West European producers of similar goods. At this point the Soviets stepped in, offering to buy everything the Finns could produce.

The offer was accepted, largely because the Finns had only one alternative: to turn an unemployed force of 80,000 skilled and semi-skilled workers into the hands of the local Communist party, which even today can pull 20% of the national vote.

• **Sales**—Since that time, the Finns have tried to find markets outside the Soviet bloc for some of these industries built by Russian reparations work. Their current optimism is based in part on recent sales from these industries: An icebreaker to Sweden, a large order of papermaking machinery to Switzerland, and a cement bag factory to Israel.

Meanwhile, Western Europe's booming economy is chewing up Finland's basic export, forestry products. The Finns have already sold in advance most of their 1955 output of lumber, pulp, and paper. Finnish exports this year should top \$708-million, well up over 1954's \$650-million. Exports in 1954 built up the Bank of Finland's gold and dollar reserves to \$139-million, compared with \$85.3-million a year ago.

- **Eastward**—The dark part of the picture is Soviet trade. Under the five-year trade pact signed in 1953, Finland must export \$800-million to Russia. Helsinki is to import \$575-million from the Russians. The hitch is that Moscow can't supply what the Finns want; for example, Helsinki has had to import wheat it doesn't need and re-export it to the West at a loss.

Communist bloc trade accounted for about 26% of Finland's exports last year, a substantial drop from the 32% in 1953. This has come about largely because the Russians won't take consumer goods and have cut imports of prefab housing. Meanwhile, the Russians have agreed to loan Finland \$10-million annually in gold to cover the trade balance deficit. The rest of the deficit will be made up of raw material imports including crude oil, from Russia and its satellites. That's why the government has pushed through a measure to build its own refinery, using Russia as its supplier (BW-Jan.22'55, p120), instead of importing from the West.

- **Politics**—The principles behind such government intervention in the economy have caused an argument that almost brought down Finland's shaky coalition government late last year. Finland's staunchly anti-Communist Social Democrats say the country can walk its tightrope only if it has a controlled economy. Some Finnish leaders say planned economics play into the Russian's hands: These men want freedom of controls so Finland can tie in with the West's relatively free trade.

It didn't help the political tussle when Soviet trade planner A. I. Mi-

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Koyan (bounced out of his post by the Russians this week) visited Helsinki in November and paid Premier Urho Kekkonen lavish compliments. Kekkonen's policy has been called pro-Russian. He defends it as realism in the face of overwhelming Soviet strength.

• Balance—Will the Russians use that strength against the Finns? The best guess is no. Heavy Russian pressure against Finland would give the lie to Moscow's present policy of conciliation toward non-Communist neutrals and U.S. allies in Western Europe.

This factor, plus Finland's past success at out-working the Russians, form the basis of Helsinki's optimism. The balance is delicate. But the Finns (who have just ordered six Russian MiGs for their Air Force to balance off six British-built Vampire fighters) think they can do it.

BUSINESS ABROAD BRIEFS



Norman Washington Manley, the next Chief Minister of Jamaica, is preparing an attack on the chronic unemployment that is making the British Caribbean colony an economic trouble spot. In New York last week, Manley said the island needs upwards of \$200-million over the next five years to develop agriculture and industry, hoped some of it might come from U.S. investors.

Kaiser's Argentine auto deal has been sewed up (BW-Oct. 9'54, p162). A new firm, Industrias Kaiser Argentina S. A., has purchased \$13-million worth of auto-making equipment and cars from Kaiser-Willys of Toledo.

France's Renault auto works aims to modernize with an \$8.5-million loan. Renault will issue 5½% fixed-income bonds; but if sales boom next year, the bondholder will get an income premium, which could go as high as 20%.

Colgate-Palmolive S. A., wholly owned subsidiary of the U.S. firm, will open a manufacturing plant near Lima in April.

Dow Tries Dutch Treat

Chemical company will set up Rotterdam subsidiary . . . More U.S. recruits for Holland in 1955 . . . A TVA for Colombia . . . Brazil eases investment rules.

The thrifty Dutch, ever on the lookout for U.S. corporations that will add to their export potential, congratulated themselves last week on an important new recruit. Dow Chemical Co. announced it was setting up a new subsidiary—Nederlandsche Dow Maatschappij—to produce chemicals at Rotterdam.

It's a major move for Dow—the company's first wholly owned manufacturing venture in Europe. The decision took a year and a half of soulsearching at Dow's Midland (Mich.) headquarters. The deal with the Dutch allows Dow to (1) build a plant on Rotterdam's waterfront (starting around mid-year), (2) import some raw materials from its U.S. plants, (3) manufacture and sell in Holland and in world markets a full line of Dow polystyrenes, glycols, magnesium alloys, and other products. Profits and capital can be brought home to Midland in dollars.

Dow's dollar investment will be small, at least at the start. The Dutch expect the company to invest \$500,000 right away, perhaps another \$800,000 within the year.

Outsiders guess output in the first full year of operations will be about \$3.5-million worth—with up to 90% of that to be exported from Rotterdam.

Like other chemical producers, Dow feels the lash of European competition on its overseas sales. A base in the Low Countries, Dow believes, will make for easier selling in European and Latin American markets.

Dow's decision delights the Dutch. It's a major success in their drive to bring U.S. companies to Holland (BW-Dec. 19'53, p139), a program that is already contributing to the nation's blooming business health.

Joseph Bourdrez, manager of the Netherlands Industrial Institute in New York and chief Dutch "recruiting" officer here, expects 1955 to be as good as 1954—which saw a record 16 U.S. corporations set up shop in Holland. Friden Calculating Machine Co.; Merck, Sharp & Dohme International; Nicholson File Co.; Borden Co.; Dobeckmun Co. are a few. With Dow, the postwar total of U.S. recruits is now 40.

Colombia's long-awaited TVA-style program is under way, complete with David Lilienthal in a key role.

In New York last week, Colombia's Corporation of the Cauca contracted with three engineering firms to begin work on a master regional development plan. It will take in the entire, 18,000 sq. mi. valley of the Cauca River, a rich agricultural area now, potentially richer in coal and hydropower resources, unused lands, new industry. Key to the program is better use of the Cauca waters—in navigation, flood control, irrigation, land reclamation.

The scope is grand: It might be a 10-to 15-year program, costing anywhere from \$200-million to \$400-million.

The idea for a regional, autonomous corporation for the Cauca is credited to David Lilienthal, former TVA chairman, who is a consultant to Colombian Pres. Rojas Pinilla. Teaming up on the engineering are Knappen-Tippetts-Abett-McCarthy and Gibbs & Hill, both of New York, and Colombia's OLAP, Bogota.

Colombians are a bit vague on how the Cauca development will be financed. They hope to raise a goodly amount at home; they look for help from the World Bank, which has smiled on Colombian projects in the past. And they are pretty sure European—and perhaps U.S.—suppliers will ship capital goods to the Cauca under long-term credits.

Brazil has a new scheme to encourage foreign investment. It might mean a lot to U.S. companies there, starved for imported equipment by Brazil's dearth of dollars (BW-Jan. 22'55, p108).

As of last week, foreign companies can invest in the form of a complete plantful of equipment, or new production units, without exchange coverage—that is, without buying dollars at the costly exchange auctions. Thus the U.S. headquarters of a Brazilian subsidiary, or a new investor, could ship idle or new equipment to a Brazilian operation, with no foreign exchange transactions at all. There are strict rules: Investors must prove they have the funds outside Brazil. And only producers of "essential goods" (trucks, for instance, but not autos) are eligible.

No one is sure just yet how the plan will work out. Theoretically, an outfit like General Motors of Brazil, which hopes one day to begin truck manufacture but can't import the needed tooling, would benefit.

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INTERNATIONAL OUTLOOK

BUSINESS WEEK
JAN. 29, 1955



Pres. Eisenhower has ended all doubts about U.S. policy toward Red China (page 27).

Where we are directly involved, as in Formosa, Peking isn't going to get away with anything. The U.S. will hold Formosa and the Pescadores, even if that involves some shooting around the coastal islands.

On the other hand, Eisenhower is ready to come to terms. If Peking accepts the status quo in Formosa, we will move the Nationalist forces back from their offshore outposts.

There are real risks in such a policy and little chance of an early settlement.

However, with U.S. military strength what it is today, it's unlikely that Peking will provoke a full-scale war. Nor is Moscow likely to back the Chinese Reds in an adventurous policy.

Important events are brewing in Moscow. They don't mean war; but they don't exactly fit with the kind of peaceful coexistence the West hopes for.

The Kremlin seems to be shifting its policy gears. Next week's meeting of the Supreme Soviet will afford a peek at what's to come.

Here's an idea of what Soviet leaders hope to accomplish at the session in Moscow:

- Compromise, patch over, the battle between Premier Malenkov and party chief Khrushchev over investment policy.
- Impress the world with Soviet power. The best gambit here would be to reveal the mighty production goals for the sixth Five Year Plan, bound to get under way this year.
- Lay out a refurbished diplomatic and psychological offensive to stall West Germany's integration into the Western alliance.

The Kremlin power struggle (BW—Jan. 15 '55, p126) has reached an intense stage: It had to be compromised short of an open crisis. You see it in the demotion of Anastas Mikoyan, unfrocked as chief of Soviet home and foreign commerce, and in Pravda's latest party line.

Khrushchev has won a preliminary victory. Mikoyan is the fall guy. He is the most outspoken advocate of expanding consumer goods production, to lighten the gray austerity of Russian workers. Malenkov tended to agree.

Pravda's pronouncements attack the consumer-goods faction. But there's no evidence that the fight is over, with a clean-cut victory for Khrushchev and damaged prestige for Malenkov. Rather, it all points to a standoff, with continued infighting to come.

In simplest terms, the Khrushchev, heavy-industry faction seems to have blocked any increase in consumer-goods investment in the 1955 budget, and probably in the Five Year Plan.

The line, then, is that the Soviet Union must not lose military superiority. It must attain atomic equality with the U.S. It must pour more and more money into hard goods—especially air and atomic weapons.

This is not necessarily a war policy. Like Americans, Russians believe

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
JAN. 29, 1955

they must negotiate from a pinnacle of superiority. And they feel they lost important ground in Europe last year.

Moscow thinks it can regain some of the ground—in Germany.

The Soviets have ended the state of war with Germany, and that implies a kind of de facto recognition of the Bonn republic. The Russians may be angling for direct negotiations with West Germans.

Chancellor Adenauer obviously is in trouble. Last weekend's mass strike in the Ruhr, sponsored by the Social Democrat opposition as well as the unions, was essentially a demonstration against Adenauer's policies. That encourages the Russians.

New Kremlin moves are expected next week, or soon after. If the Soviets offer any reasonable-sounding deal on uniting Germany, there will be strong pressure in Germany and France to talk with them—now. And final O.K. of the Paris agreements, the Western European Union with German arms, might be delayed again.

—•—

Plans for a big-scale Asian aid program are dying quietly. And the Administration has made no hard decisions yet on what kind of Far East economic help the U.S. will provide.

Certainly it won't be large. Only some \$250-million additional funds are earmarked for Asian economic aid. And certainly it won't be spent on a regional, multilateral basis as it was in Europe. Top Administration officials don't trust Asian leaders to handle the money without tight bilateral agreements with Washington.

That dashes any hope of grabbing the ball from Red China at the upcoming African-Asian conference with a big aid lure.

This doesn't exclude U.S. backing for economic development in Asia next year.

Washington's opposition to wide-ranging Asian aid may soften with events. Communist political—and economic—pressure this year might prod Washington into emergency action.

Harold Stassen, who has fought for an all-out effort, had the cards stacked against him in his aid proposals. Treasury Secy. Humphrey would have none of it. Key State Dept. officials fought Stassen, too—overruling their own Asian experts. Secy. Dulles stood aside. The White House doubted the feasibility of the Stassen plan.

—•—

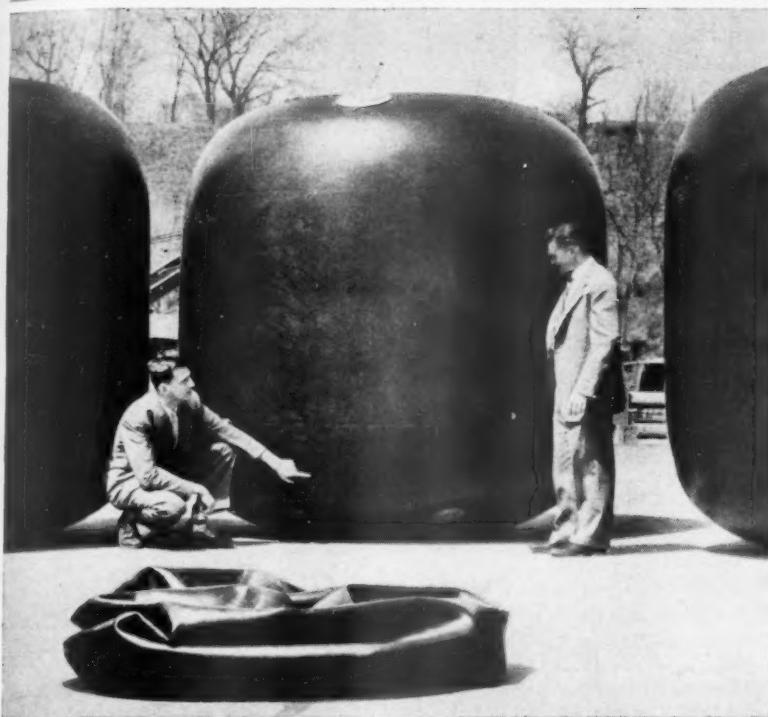
Denationalization of Britain's steel industry is moving nicely. The Treasury's public offering of 10-million shares of Colvilles, Ltd., leading Scottish steelmaker, is a rousing success.

It's proof that investors no longer fear the Labor Party's return to power—or at least they figure that Labor won't renationalize, now that 60% of the industry's equity has been sold off.

The change in sentiment came last October when stocks of previously denationalized steel companies rose from a discount to par—then marched to a premium. The main investors have been institutions. But since fall, individuals have shown increasing interest.

There will be a pause in steel denationalization now. All the plums are sold save the giant Steel Co. of Wales, biggest of them all.

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LABOR

Now Lewis Leans on the Law

● Mine Workers chief, long a fierce foe of federal labor legislation, now finds it may be a crutch.

● He wants the Walsh-Healey Act interpreted to preserve the high wages of his miners.

● Usually, the law has been used to boost the standards of low paid jobs, by putting a floor under rates due those working on government contracts.

John L. Lewis, who has frequently loosed his famous invective at government "interference" in United Mine Worker operations, is appealing for federal aid to keep coal wages high. He's asking help through the Walsh-Healey Act—a minimum-wage law that is currently threatened in Congress and the courts.

The 19-year-old law has been a federal device for boosting wages in relatively low-paying industries such as textiles, tobacco, shoes, drugs, and paints and varnish. Now Lewis wants to bring his high-paid miners under the W-H umbrella.

Next week, the veteran labor leader takes over the unfamiliar role of petitioner to the government. In a formal hearing, he will urge Labor Secy. James P. Mitchell to set basic wages to be paid by bituminous coal operators on government contracts.

• **Aimed at TVA**—Lewis' move is directed at the federally owned TVA, a heavy buyer of coal through private mine owners. He accuses the agency of ordering coal from nonunion operators who underbid on contracts because they pay wages as much as \$1 an hour lower than the UMW scale.

The appeal, backed by several major coal companies that deal with the mine union, asks the Labor Secretary to use his Walsh-Healey authority to issue "prevailing minimum wage determinations" on government contracts over \$10,000. In this case, Lewis wants Mitchell to set UMW-negotiated rates for all government coal contracts.

• **Background**—Judging from Mitchell's past W-H practices, the UMW chieftain will get a receptive hearing. But the Labor Secretary's power has already been stymied in the federal courts, and there's a chance it may be further crippled by Congress. Here's what is happening:

• Southern cotton textile firms in District Court in Washington will

answer a government challenge to their previous move that blocked a proposed \$1 minimum for their industry.

• Some congressmen, particularly from the low-wage South, may move to repeal the Secretary's wage determination authority. This step is likely if Congress raises the general federal minimum wage to 90¢ or \$1. The idea would be to make this minimum apply to Walsh-Healey cases, assuring that no higher rates could be set.

A majority of previous W-H determinations have been set close to the going federal minimum wage. But that's not Lewis' goal; he wants hourly wage orders ranging from \$2.01 in Alabama to \$2.34 in Montana.

• **Original Aim**—The mine union's argument is based on the original purpose of the law: to enable unionized, high-wage companies to bid equally for government work. In its earliest days, the law was used to prevent wage undercutting by employers. More recently, it has had the effect of minimizing wage differentials between the North and South.

This is the first time Lewis has sought a Walsh-Healey determination. He wants it now because of the upsurge of nonunion mines that have found profitable going in the depressed industry. His target, TVA, buys about 15-million tons of coal a year and the UMW claims much of this is from low-paying nonunion mines. TVA has said that it follows the principle of dealing with the lowest bidder.

• **Mitchell's Position**—The issue of one government agency moving against another is a paradox Mitchell must face. But so far he has accepted the theory of Walsh-Healey to the point of backing those determinations by Democratic Labor Secretaries and issuing new orders of his own.

Currently, he's making a legal fight to complete orders setting higher minimums for segments of the textile in-

dustry and is processing other cases involving such industries as photographic supplies, batteries, electric lamps, and envelopes. The fight with textile producers may settle, once and for all, the effectiveness of the law and the Secretary's authority to use it.

• **Court Challenges**—The issue in dispute between Mitchell and Southern textile operators isn't new. In fact, it was the major reason for an amendment to Walsh-Healey in 1952 permitting opponents of a new minimum wage order to challenge it in the courts.

Prior to the new provision, known as the Fulbright Amendment, affected industries were required to accept a wage order without legal recourse. But when Congress granted court review, textile unions promptly challenged two determinations by former Labor Secy. Maurice Tobin—a \$1 minimum for cotton textiles and \$1.20 for woolen and worsted.

The textile firms base their protest on the method of setting the new wage rates. Tobin issued the rates on the basis of the industry's pay scales nationally, so that the net result is a minimum wage level close to that paid in Northern textile mills, and higher than their Southern counterparts. Mitchell has backed this procedure of industrywide determinations.

• **"Locality"**—In the case of cotton textiles, 144 Southern firms went into District Court two years ago and won an injunction blocking the order. They argued that Walsh-Healey rules restrict the Labor Secretary to making determinations by "locality," which would mean lower rates for their mills. Judge Henry A. Schweinhaut agreed there was "very grave doubt" that the determination was properly made.

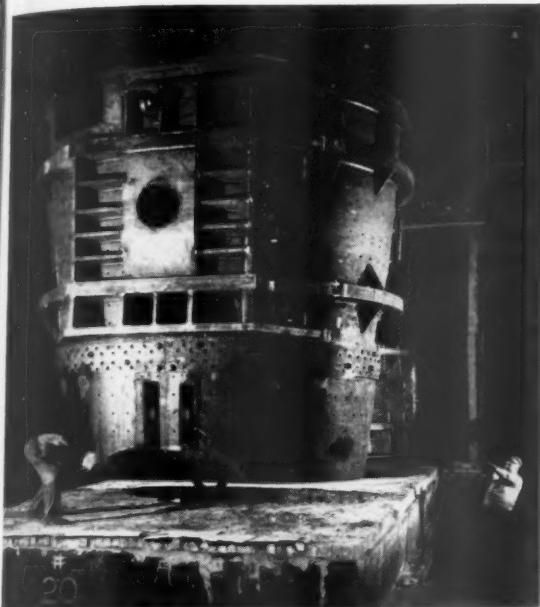
The section in question says the Labor Secretary shall set minimum wages determined "by the prevailing minimum wages for persons employed on similar work or in the particular or similar industries or groups of industries currently operating in the locality in which the materials" are to be manufactured.

Justice Dept. attorneys, acting for Mitchell, recently sought to lift the injunction. They told the court that the industry determinations were properly made to prevent wages from being depressed by the movement of industries into low wage areas. On the technical point, they argued that "locality" is only one of three methods for determining rates and the others permit

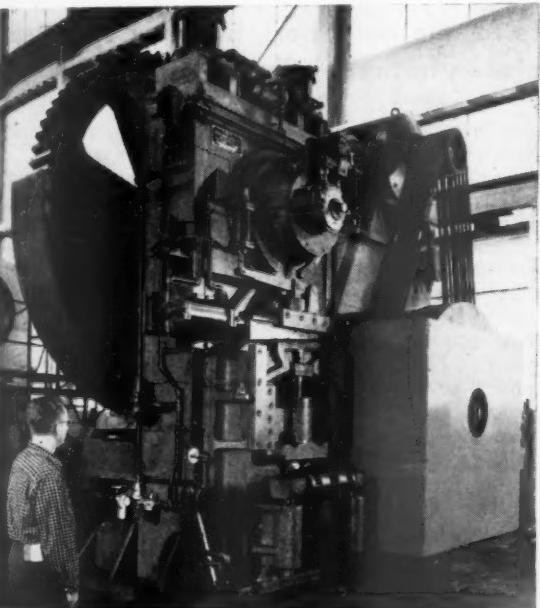
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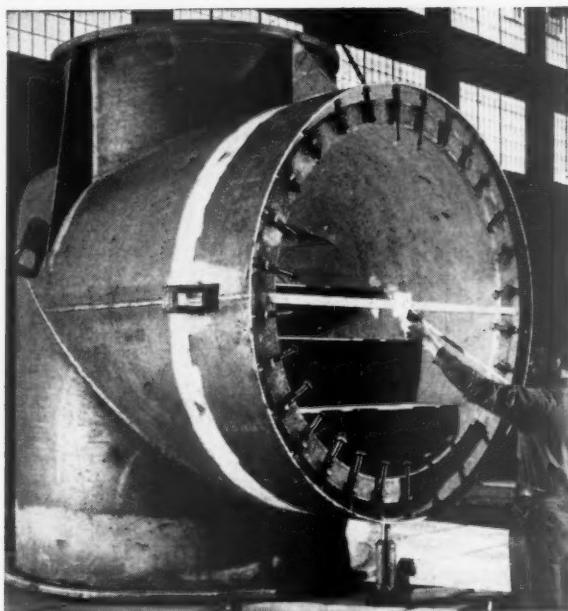
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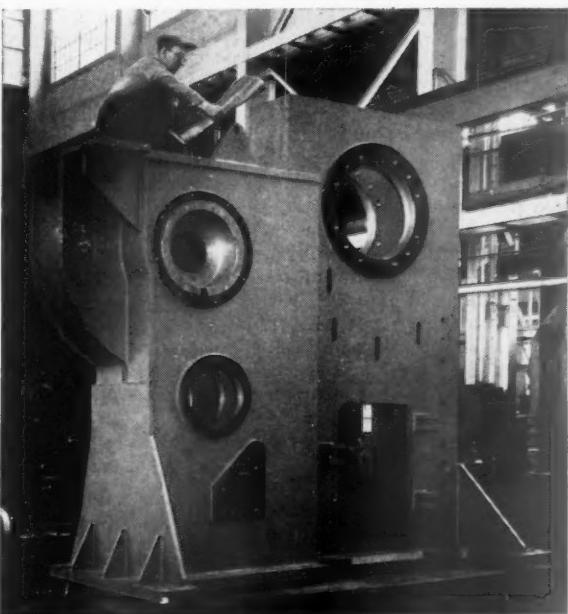
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fixing wages on an all-industry basis.

- **Labor's View**—Besides, the government said, only 14 of the 144 companies would be affected by the \$1 minimum since most already pay above or close to that figure.

The industrywide theory is considered important by Mitchell and labor unions that generally seek the higher rates; they believe the law would be valueless without the broader authority. Their viewpoint is generally supported by Northern businessmen who must compete with Southern industry.

For the Southern firms, it's equally important. Their representatives are prepared to fight the law in this session of Congress and figure they may now have the gimmick to win.

Congress seems certain to come up with at least a 90¢ federal minimum. When this happens, W-H opponents will attempt to include a provision permitting the wage-hour law to supersede Walsh-Healey and, in effect, repeal its wage determination provision.

Originally, these opponents had contemplated seeking a rewriting of Walsh-Healey to make "locality" a firm yardstick. But because of the liberal slate of Democrats on the Senate and House Labor Committees (BW-Jan.22'55, p134), they dropped this.

They have been concerned, too, that an approach may be made from the other side to liberalize the law. Mitchell has expressed dissatisfaction with the Fulbright Amendment, which restricts the Labor Dept.'s powers; bills are ready to repeal this section. But with the struggle expected over other parts of the Administration's labor proposals, Mitchell isn't expected to press this issue.

• **Industrywide**—In the 19 years that the law has been on the books, most of the determinations affecting some 40 industries have been industrywide. The law was passed after the National Industrial Recovery Act, with its minimum wage authority, had been declared illegal. Frances Perkins, then Labor Secretary, issued a number of W-H orders in low-paying industries until the general minimum wage was raised to 40¢.

Tobin, who took office in 1948, followed with a series of Walsh-Healey orders up to the still-uncompleted textile determinations issued on his last day in office. Most were in low-paying industries, but one order was made in the steel industry in 1949 that reached the Supreme Court. The high court's decision on the issue had the effect of ruling out court review of the decisions.

The Secretary's Walsh-Healey authority is not limited to setting prevailing wages. It also includes regulations on child labor, overtime payments, and safety standards.



CANDIDATE for NLRB general counsel, Theophil Kammholz (left), gets support from GOP Sen. Everett Dirksen (right) at Senate hearing on his nomination as . . .

Democrats Make Labor Hay

In the majority now, the Democrats could block Eisenhower's choice for the NLRB post, but they appeared content to unearth issues for more effective use in 1956.

Senate Labor Committee Democrats this week signaled the start of a cold war over Eisenhower Administration labor policies.

The occasion was a committee hearing on the President's candidate for general counsel of the National Labor Relations Board, Chicago attorney Theophil C. Kammholz (picture). Before it was over, the Democratic majority had laid out a record that could provide the party with political ammunition for next year's elections.

• **Raising Issues**—At midweek, the committee had not formally voted on whether to approve Kammholz for the important NLRB post, but there seemed little disposition on the Democratic majority's part to make a firm stand against the nominee at this time. They appeared content to raise misgivings that could be used for future reference.

The 49-year-old attorney, a partner in the Chicago firm of Vedder, Price, Kaufman & Kammholz, disclosed at the one-day hearing that his services, primarily in labor relations, had all been for business clients. The Democratic side challenged the ability of an attorney for industry to be impartial

in a role that requires action against management and labor alike.

Illinois Sen. Paul Douglas led the opposition with pointed questions about what Kammholz would do if one of his former clients was charged with a Taft-Hartley violation. The general counsel, he noted, bears the sole responsibility of issuing complaints without review by NLRB or courts.

In all such cases, the soft-spoken attorney replied he would delegate this authority to "someone else on the staff." But, he added, "I do not have the slightest doubt of my ability to be fair."

• **No Personalities**—Throughout the session, which was notable for its absence of bitterness despite the critical questioning, Republican members supported Kammholz. The political division was pinpointed by the testimony of the other Illinois senator—Republican Everett Dirksen (picture)—in support of the nominee.

The only opposition besides that of the Democratic politicos came from four union officials, representing Chicago printing trades unions. This, too, avoided turning into a personal attack. Delegation leader Henry L. Coco, sec-

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retary of the Chicago Allied Printing Trades Council, noted: "There is no suggestion that as an employer's attorney, Kammholz has failed to be courageous or to keep his word. Our criticism is precisely that, because he is thoroughly an employer's attorney, he is not able to bring impartiality to bear on the employer-union judgments he must make as general counsel."

• **Philosophy**—This was the point taken up by the majority, headed by committee Chmn. Lister Hill of Alabama. It evolved into a philosophical discussion with New York's Democratic Sen. Herbert Lehman claiming that "the President should not select a man just experienced in one point of view . . . for a sensitive, completely arbitrary, dictatorial job." GOP Sen. Gordon Allott of Colorado countered that the committee had reached a "dog-chasing-dog mental situation with statements that you cannot represent management and have a regard for labor."

The Democrats were in the unusual position of stating their opposition to a candidate for an important labor post who was not being opposed by either AFL or CIO.

Pay Protests

Contractors in the TVA area complain wage-setting policy of agency is "unsettling" prevailing rates.

Debate in Washington over new Walsh-Healey Act wage minimums for work under government contract (page 120) and over proposals for a new federal minimum wage has tended to obscure a growing attack on the Tennessee Valley Authority's wage policies.

Private contractors in the TVA area complain that the federal agency is setting itself up as the "authority for determining wage rates in the various vicinities in which it does construction work." New pay scales that went into effect this month are "unsettling" labor relations throughout the TVA area, contractors charge.

As a result, Associated General Contractors has appealed to Labor Secy. James P. Mitchell for (1) a "prompt hearing" on contractors' grievances, and (2) support in "appealing to the President . . . to require TVA to act within its legal authority and refrain from usurpation of the authority and functions of the Dept. of Labor" in deciding questions of prevailing wages.

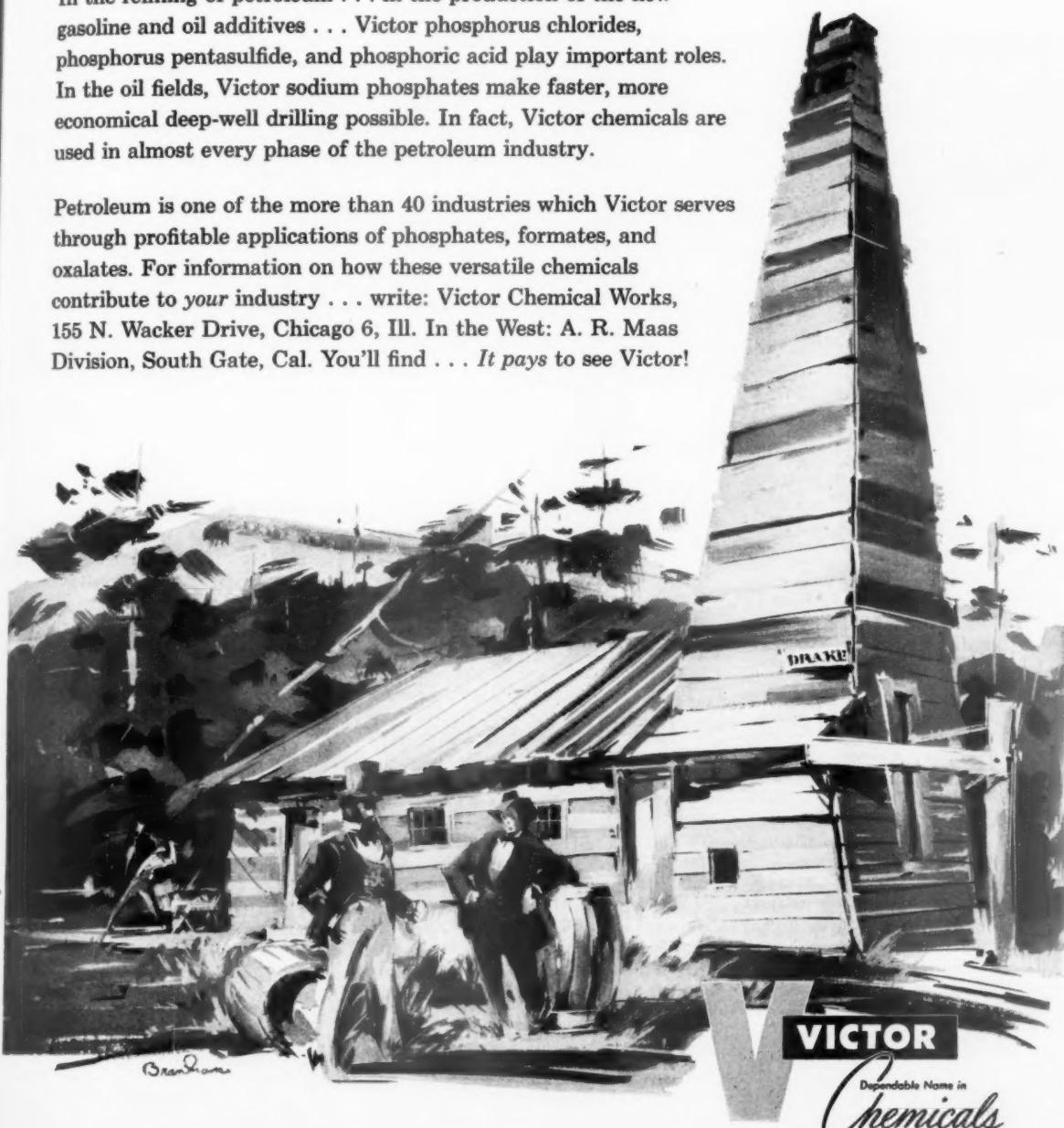
• **Pay Goes Up**—Just before the end of 1954, TVA announced new 1955 wage scales for some 9,000 hourly paid workers and another 5,000 salaried workers. The former got increases rang-

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ing from 5¢ to 12½¢ an hour, and the latter from \$100 to \$150 a year. According to TVA, the new scales were arrived at in a "fair and equitable" manner on a basis of prevailing rates and in negotiations with representatives of the various AFL unions involved.

Under the new scales, TVA will be paying more than non-TVA employers are paying for work by all but two of 12 construction crafts.

• **AGC Objects**—Associated General Contractors objects to the higher rates for two reasons: (1) The higher scales for TVA work will draw craftsmen away from private construction, and (2) they will create pressure for higher wages on private jobs.

According to AGC, private rates are in line with the Labor Dept.'s appraisal of the area's "prevailing rates and wages" under the Davis-Bacon Act, which requires that prevailing rates be paid on public works. The association says TVA's rates are "directly in conflict" with the Labor Dept. findings and should be lowered to conform.

• **Upheld in Past**—While the protest is the strongest attack yet on TVA scale-setting, it isn't the first. The Authority's procedures have been reviewed by the Secretary of Labor after criticisms on two other occasions. Once, the issue was raised by a labor union, the other time by a private contractor. Both times, the Secretary upheld TVA.

Worry Brings . . .

. . . strike threat to a head at Studebaker. Union fears a change in "friendly" management.

Studebaker production workers in South Bend, Ind., accepted a management proposal to end an incentive pay system last August. They weren't happy about it, because it cut pay an average 15%. But they went along after Studebaker warned them that their jobs depended on improved competitive costs (BW-Aug. 21 '54, p122).

Last week, trouble flared over the mid-1954 pay cut and over subsequent changes in work rules and job standards. Slowdowns and unauthorized work stoppages occurred in several departments. Then United Auto Workers (CIO) Local 5 voted 7,188 to 806 for a plantwide walkout.

• **Who's the Boss?**—Workers' dissatisfaction over pay and work standards is unquestionably at the root of the strike threat. However, it's not the only reason. Another is growing worry in Local 5 over the present trend of control in the Studebaker-Packard Corp.

Studebaker and Packard merged last Oct. 1—shortly after the Studebaker employees made their concessions to a management that had, through the years, a consistent record of good relations and fair play with UAW. In the union's opinion, Packard's management had no such good record.

As Packard's James J. Nance established his control over the new corporation, uncertainty and confusion arose in the old Studebaker top echelon. This was reflected quickly in the ranks of UAW employees. They feared the loss of management men who had been reasonably friendly in the past. Meanwhile, Nance's campaign to bring production standards up to higher, competitive levels (Nance complained that they were as much as 20% below standards of other auto producers) was taken in union ranks as evidence that fears of an "unfriendly" management were warranted.

The last straw seemed piled on last week when Nance sent letters to employees commenting that the Studebaker Div. of Studebaker-Packard is "still losing money" on every car built. To the workers, this meant new cost-saving moves, to help meet competition.

• **In the Middle**—Believing themselves caught in the middle between their precedent on concessions and the possibility of new demands, workers voted for the walkout.

The local's membership (about 10,

Cost of Living:

What's Happening to It

	Total Cost of Living	1947-49 = 100			
		Food	Clothing	Housing	
				Total	Rent Only
December, 1948	103.0	101.5	104.8	103.7	103.0
December, 1949	101.0	97.7	97.1	104.2	107.0
December, 1950	106.9	107.1	102.2	109.4	110.4
December, 1951	113.1	115.0	108.1	113.9	115.6
December, 1952	114.1	113.8	105.1	116.4	120.7
December, 1953	114.9	112.3	105.3	118.9	127.6
January, 1954	115.2	113.1	104.9	118.8	127.8
February	115.0	112.6	104.7	118.9	127.9
March	114.8	112.1	104.3	119.0	128.0
April	114.6	112.4	104.1	118.5	128.2
May	115.0	113.3	104.2	118.9	128.3
June	115.1	113.8	104.2	118.9	128.3
July	115.2	114.6	104.0	119.0	128.5
August	115.0	113.9	103.7	119.2	128.6
September	114.7	112.4	104.3	119.5	128.8
October	114.5	111.1	104.6	119.5	129.2
Dec. '54	114.3	110.4	104.3	119.7	129.4

Data: Bureau of Labor Statistics.

BUSINESS WEEK

Drop May Affect Bargaining

The Labor Dept.'s cost-of-living index dropped again in the month ended Dec. 15, to the lowest level since May, 1953—114.3% of 1947-49 average costs. The decline from mid-November's 114.6% (BW-Jan. 1 '55, p58) was led by a substantial drop in food prices (now off 3.7% since last July), but most other consumer goods also cost less.

• **No Adjustments**—No major escalator contracts have wage adjustments due on the basis of the December index, now that railroad unions have ditched c-of-l clauses. The next major adjustments will be in auto and electrical-manufacturing industries and will depend on the next (mid-January) c-of-l index.

Even though this isn't an adjustment

month, the latest index figure will play a role in wage bargaining. The fifth straight drop in the index further limits the unions' arguments for a substantial pay boost in 1955 after moderate raises in 1954 (BW-Jan. 22 '55, p128). It also strengthens the position of employers who contend that increases aren't warranted this year.

• **End of Escalation?**—If the downturn continues, it might mean the end of c-of-l contract clauses in major contracts. The United Auto Workers (CIO) lost 2¢ an hour in index drops in 1954, and may lose another 1¢ next month if the index drops 0.2% more. Already, UAW is talking of following rail unions in ending escalation.

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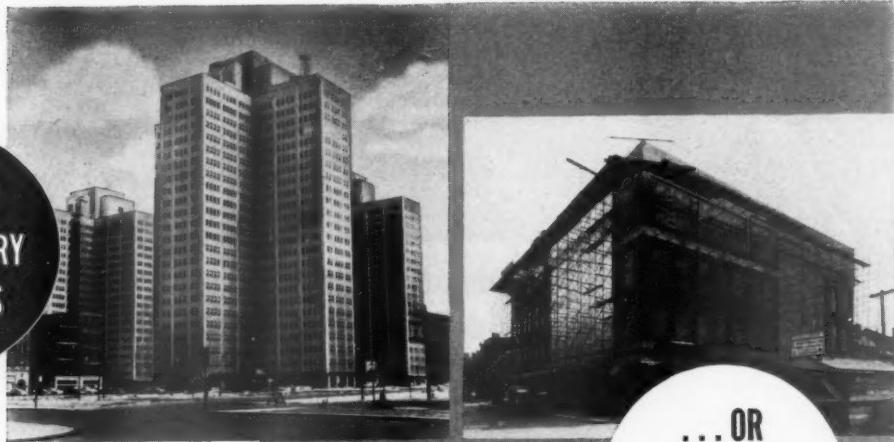
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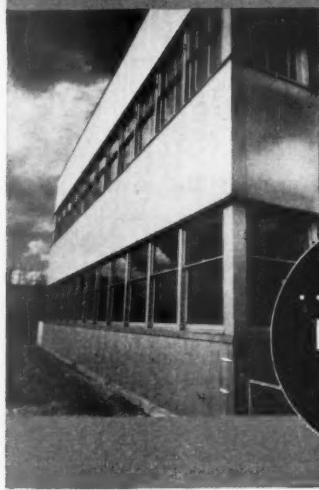


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2 "Stainless Steels for Store Fronts and Building Entrances"—40 pages of valuable data on examples and details. AIA File No. 26D.

3 "Stainless Steel Curtain Walls"—A 24-page progress report on methods. AIA File No. 15-H-1.

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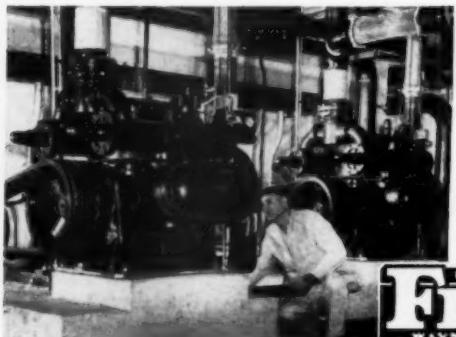
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000) made clear by pointed attacks on the corporation and by the one-sided vote that it is serious about strike plans. But, at the same time, Local 5 left a way open for the corporation to avoid an interruption in production.

Local officers invited the plant management to give "firm commitments"—in advance—on what management intends as "a full and fair day's work," and assurances that any further changes in management personnel would not result in new "violations" of job standards.

LABOR BRIEFS

Wage terms negotiated for 54,000 long-distance truck drivers in the Midwest (BW-Jan.22'55,p136) have been extended to six years, with a reopening in 1958 on economic issues. As drafted initially, the pact ran three years with an immediate 10¢ pay hike, 8¢ more in 1956, and 8¢ in 1957. . . . The first areawide contract covering 175,000 "local cartage" drivers in the same Midwestern area will also run six years, with a reopening in 1958, and is otherwise similar to that of long-haul drivers.

Taft-Hartley revisions will be sought again by AFL's Building Trades Dept., which represents some 3-million construction workers in 19 crafts. Officials of the unions involved will meet in Washington Mar. 7-10 to outline changes that construction unions say should be made—and, at the same time, to do a little lobbying.

Leftwing strength is ebbing in International Harvester Co. plants—once a stronghold of the Farm Equipment Workers, one of the unions ousted by CIO in 1949 for pro-Communist leanings. I-H employees in Richmond, Ind., recently voted 580-to-147 to switch from FEW (now a division of the leftist United Electrical Workers) to the United Auto Workers (CIO). Afterward, I-H reported that UAW now bargains for 21,746 of its employees, FEW for 10,646.

Retirees under the Ford Motor Co. pension plan reached 10,000 this month, and benefits paid since the plan went into effect in March, 1950, topped \$13-million. Monthly payments now exceed \$400,000, and about 150 new names go on the pension roll each month.

Joseph F. Finnegan, New York attorney, last week got a quick O.K. from the Senate Labor Committee as new head of the Federal Mediation & Conciliation Service (BW-Dec.11'54,p127).



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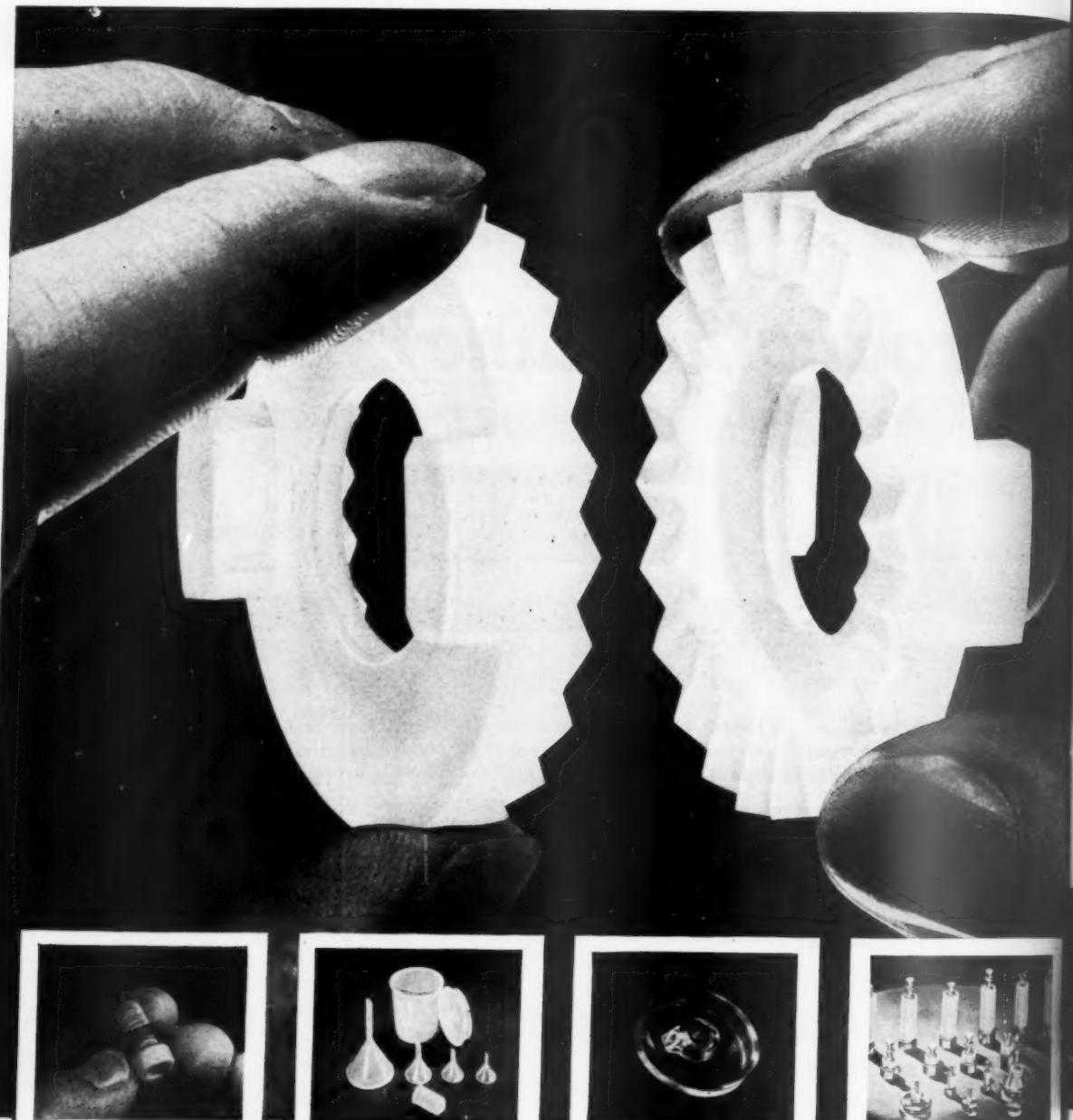
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Clutch facings of "ZYTEL" nyl... ...save \$150 per



ZYTEL® nylon resin is a versatile Du Pont engineering material for mechanical applications. Parts made of it are strong, resilient, and lightweight. Often they require no lubrication. "Zytel" can be economically mass-produced by injection molding or extrusion. Molded parts seldom need refinishing or machining. Here is a miniature tip jack of "Zytel" used on radar equipment.



ALATHON® polyethylene resin has good chemical resistance and excellent dielectric properties. "Alathon" is tough and flexible over a wide range of temperatures. Freedom from odor, taste, and toxicity makes it an ideal packaging material. Shown are several types of non-breakable, lightweight laboratory ware that are molded of corrosion-resistant "Alathon."



LUCITE® acrylic resin is used to make products that are both functional and decorative. The most beautiful of all engineering materials — it is produced clear and in color. Products of "Lucite" are shatter-resistant, have good dimensional stability and possess excellent resistance to weathering. Threaded roll caps of clear, non-shatterable "Lucite" are used on textile machines.



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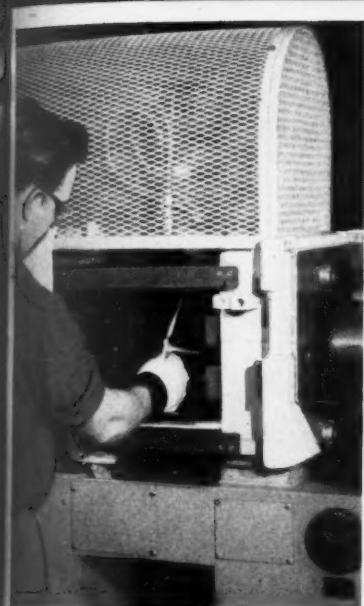
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This clutch revolves at 1750 rpm, transmitting 75 ounce-inches of torque. It is engaged and disengaged up to 40 cycles a minute, 24 hours a day. Minnesota Mining & Manufacturing Company, St. Paul, Minnesota, formerly used heat-treated metal facings for this heavy-duty job, but had to replace them an average of 17 times a year. After a change to facings molded of tough, wear-resistant "Zytel" nylon resin, replacements were required only *three times a year!*

The metal clutch components cost \$8.75 apiece. Those of "Zytel" are 32¢ each. The savings realized on the first 91 facings of "Zytel" covered the costs of the die required to mold these precision parts. Minnesota Mining & Manufacturing Company estimates an annual saving of \$150.00 per clutch installation, to which can be added savings which accrue from only three machine shutdowns a year instead of seventeen.

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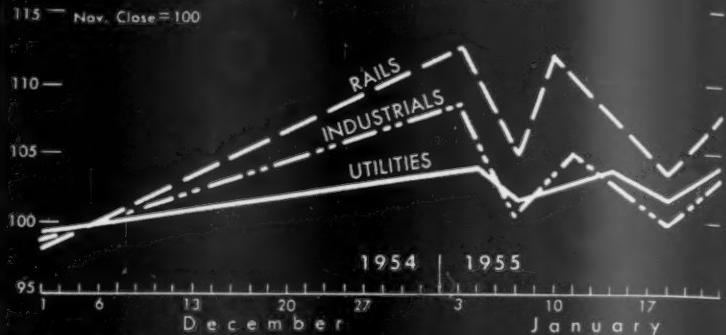
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See Clues on page 154

THE MARKETS

During the Market's Recent Ups-and-Downs



Data: Standard & Poor's Corp. Daily Stock Averages.

Odd-Lot Investors and Traders



Data: N.Y. Stock Exchange.

Now—Boiling Up to a Test

If you compare, as does the chart above, the recent market activity of Wall Street's "little fellows" and the concurrent price performance of Big Board stocks in general, you come up with some revealing findings.

You find first of all that the responsibility for many of the market's ups-and-downs in the last couple of months can't be put at the door of these odd-lot traders.

• It wasn't buy-orders from them that sparked December's wildly zooming stock market—the climb that touched off a hike in margin requirements and a Senate inquiry (BW—Jan. 15 '55, p138).

• Nor can you blame the repeated flurries of sharp price weakness since

then on any frightened dumping of stocks on their part.

• Not So Dumb—Perhaps more interesting is the light the comparison throws on the long-asserted claim of many Streeters that you can always do better marketwise if you go counter to the odd-lot trading trend. The small investor and trader, say these Streeters, is seldom right. But the charts don't bear them out. The figures indicate instead that perhaps the small fry aren't always quite so dumb as they are pictured.

Look at what the odd-lotters were doing in feverish December. In that month, they seem to have been much smarter marketwise than those bigger operators whose avid buying sent the

indexes bounding from one new bull market high to another. Except for one day, odd-lot sales always exceed the daily crop of similar buy-orders.

Since then, with the market jumping up and down, many big operators have been hugging the sidelines. But buy-orders flowing in from the odd-lotters have persistently run ahead of their sales—often by big margins.

• Hint—Only time will tell, of course, whether this shift to the buying side will prove as foreseen as the refusal to be carried along by December's bullish effervescence.

But in midweek there was more than a hint that the odd-lotters might be right. On Monday and Tuesday, the market, mulling over the current Formosa situation, was mainly churning around—with spectacular gains by some popular war stocks.

By Wednesday, this picture had changed sharply. Despite war anxieties, the market was again boiling upward—touched off by bullish news from U. S. Steel Corp. Big Steel's directors raised its coming quarterly common dividend payment from 75¢ to \$1 and proposed a 2-for-1 split of that issue.

This totally unexpected news promptly touched off rises up to \$5, or even more, among leading steel issues.

On late tapes, the strength started spreading through many other sections of the stock list.

Investors and traders figured that Big Steel wouldn't have taken this action unless it was sure of an excellent year. This led to the belief that 1955 was likely to prove a better earnings and dividend period for business generally than many had thought. Many had been looking for a bright first half, but were fearful of some definitely fading tendencies later.

• Is It "It"?—No one, of course, could say at midweek whether the rally was doomed to an early death, like several that had preceded it. But Wall Street's early reaction was, "This is it." Streeters saw indications shaping up for a successful testing—not far ahead—of the bull market highs set by the indexes a few weeks back.

For the moment at least, they weren't worried by the possibility of a shooting war in the Far East (they don't think it will happen), strikes in the auto or steel industries (they term the threat exaggerated), or the possible unfavorable effects on market sentiment of the coming Fulbright inquiry. They even looked for the inquiry to have a beneficial effect and keep any dangerous speculative exuberance in check.

It's Still a Selective Bull Market

The sampling below points up the fact that in its 1955 downward churning, the stock market hasn't acted much differently from the way it did during the swift November-December rise in one basic respect: It has con-

tinued to be a very selective affair. Many low-priced shares, as well as some of the bluest chips, have done very well. Others, just as low-priced or just as blue, have lost all or most of their post-election gains.

Stock	Pre-election price	Post-election high	Recent price	Post-election Gains Maximum	Now
Allied Chemical.....	\$90.00	\$104.50	\$93.50	16.1%	3.9%
American Airlines.....	17.00	22.62	22.00	33.1	29.4
Amerada Petroleum.....	183.50	230.50	214.62	25.6	17.0
Armstrong Cork.....	87.00	92.75	86.75	6.6	-0.3
Atchison, Topeka & Santa Fe.....	115.00	134.87	126.25	17.3	9.8
Atlantic Coast Line.....	120.00	159.00	148.00	32.5	23.3
Baldwin-Lima-Hamilton.....	9.00	14.12	13.62	56.9	51.3
Beech-Nut Packing.....	32.00	32.75	30.00	2.3	-6.3
Bethlehem Steel.....	79.12	114.00	109.25	44.1	38.1
Chrysler Corp.....	64.50	74.50	67.50	15.5	4.7
Cincinnati Milling Machine.....	78.37	77.50	68.00	-1.1	-13.2
Climax Molybdenum.....	51.00	68.37	64.87	34.1	27.2
Colorado Fuel & Iron.....	17.12	24.62	22.25	43.8	30.0
Container Corp.....	63.62	68.75	64.75	8.1	1.8
Corn Products Refining.....	80.50	91.50	82.25	13.7	2.2
Cudahy Packing.....	5.00	7.75	7.00	55.0	40.0
Delaware & Hudson.....	42.12	57.00	52.25	35.3	24.1
Dow Chemical.....	38.75	48.75	45.12	25.8	16.4
E. I. du Pont de Nemours.....	139.50	175.75	160.25	26.0	14.9
Erie RR.....	16.62	22.50	20.87	35.2	25.6
Robert Gair.....	25.75	31.75	28.75	23.3	11.7
Gar Wood Industries.....	4.37	7.50	6.62	71.6	51.5
General Electric.....	42.12	51.62	48.75	22.6	15.7
General Motors.....	89.87	107.37	97.62	19.5	8.6
Houston Oil.....	75.00	114.25	109.00	52.3	45.3
Standard Oil (N. J.).....	98.00	115.37	109.37	17.7	11.6
Union Carbide & Carbon.....	77.50	87.62	81.87	12.6	5.6
Union Pacific.....	140.00	154.12	143.50	10.1	2.5
U. S. Steel.....	56.62	75.37	72.00	33.1	27.2
Westinghouse.....	69.62	82.62	78.37	18.7	12.6

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worth \$40,000—
another only \$4,000?
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This book provides a blueprint that shows how you can win executive success. Showing that executive genius is not a quality one is born with, but the result of concentrated effort along the right lines, the book tells how to direct the same efforts and thinking which you already expend daily toward the definite goal of improving your executive ability. Packed with helpful pointers it tells how the up-and-coming executive can make the most of his capabilities, grow in executive stature, and rapidly qualify for the upper bracket responsibilities and rewards.

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- 3 best methods for improving personality
- 11 ways to put over your personality
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Wall St. Talks . . .

. . . about brokers' loans
. . . Treasury plans . . .
Douglas split proposal . . .
the high cost of hindsight.

One reason why Wall Street isn't worrying over soaring brokers' loans: The idle cash of customers that's dozing in brokerage tills has topped \$1-billion. . . . Street semantics: "War" stocks are more and more being called "defense" issues; "speculation" is being dressed up as "taking calculated risks."

The municipal bond market is in a tizzy over the uncertainties of Treasury financing plans (BW-Jan. 22 '55, p60). Last week the backlog of advertised inventory hit a record \$308-million. And falling prices shoved the Dow-Jones municipal bond yield index (which moves inversely to prices) to a six-month high of 2.41%.

Cynics say Douglas Aircraft wants to use its proposed 3-for-2 stock split as a discreet veil to pull over its big present and prospective earnings. Despite last May's 2-for-1 split, per share earnings in 1954 totaled almost \$15.

Labor negotiations will soon take up even more time in brokerage house discussions. That's because General Motors and Ford will start wage bargaining with the UAW (CIO) in March, while the basic steel companies will begin dickering with the Steel Workers in April. . . . Board room habitues, notably those who bought stocks just before they dropped, take a dim view of some market-letter writers. The offending seers are those who now say that "there is less reason to be uneasy than there was a few weeks back," since the market then was "getting too violent for its own good." The investors wonder why the seers hadn't passed the word earlier.

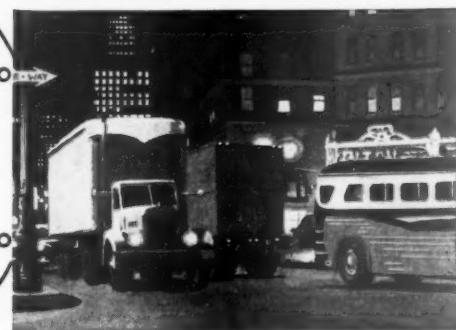
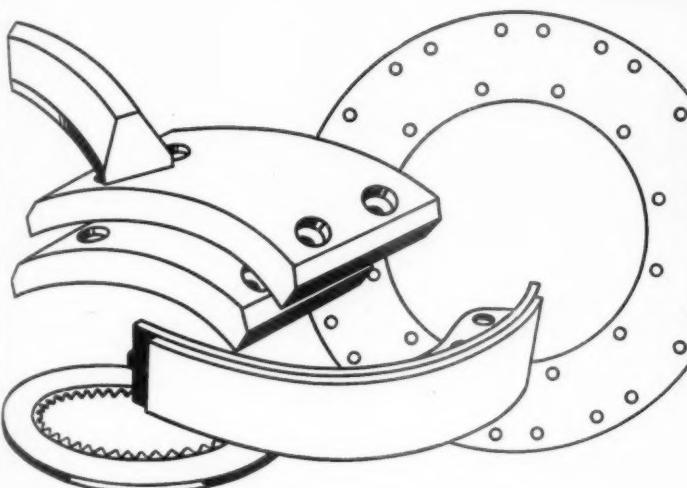
Thin markets have done more to create losses than any public rush to sell stocks, according to Harold Clayton, of Hemphill, Noyes & Co. Clayton points out that on Monday of last week, when the market hit its 1955 low, nine of the 25 stocks that fell three or more points did their diving on volume of less than 1,000 shares.

A Vermont Republican, Sen. Ralph Flanders, is another legislator with doubts about the stock market. Flanders hopes that the Federal Reserve will make another slight boost in margin requirements unless the bull market levels off.

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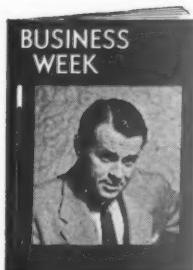
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continuing reports on
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**Chrysler Industrial V-8 Engines are... pound for pound
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Engine	Horsepower and Piston Displacement	Pounds per Horsepower	Fuel Consumption—pounds per BHP per hour	Horsepower per Cubic Inch Displacement	
Engine A	110 at 2200 RPM 358 cu. in.	(Stripped Engine) 7.38	.54	.307	CHRYSLER ADVANTAGES OVER ENGINE A ... delivers 18 more horsepower ... weighs 96 pounds less with 24% less weight per horsepower ... uses 7.5% less fuel at average operating speed ... delivers 26% more horsepower per cubic inch displacement
Chrysler Model Ind. 24A	128 at 2200 RPM 331 cu. in.	(Stripped Engine) 5.58	.50	.387	CHRYSLER ADVANTAGES OVER ENGINE B ... delivers 34 more horsepower ... weighs 5 pounds less with 25% less weight per horsepower ... delivers 32% more horsepower per cubic inch displacement
Engine B	104 at 2400 RPM* 330 cu. in.	(Stripped Engine) 6.92	(Information not available)	.315	CHRYSLER ADVANTAGES OVER ENGINE C ... delivers 29 more horsepower ... weighs 60 pounds less with 27% less weight per horsepower ... uses 10.5% less fuel at average operating speed ... delivers 25% more horsepower per cubic inch displacement
Chrysler Model Ind. 24A	138 at 2400 RPM 331 cu. in.	(Stripped Engine) 5.18	.50	.416	CHRYSLER ADVANTAGES OVER ENGINE D ... delivers 11 more horsepower ... weighs 19 pounds more but with 6% less weight per horsepower ... delivers 5% more horsepower per cubic inch displacement
Engine C	99 at 2200 RPM 320 cu. in.	(Stripped Engine) 7.64	.56	.309	CHRYSLER ADVANTAGES OVER ENGINE E ... delivers 31 more horsepower ... weighs 395 pounds less with 48.7% less weight per horsepower ... uses 14% less fuel at average operating speed ... delivers 49% more horsepower per cubic inch displacement
Chrysler Model Ind. 24A	128 at 2200 RPM 331 cu. in.	(Stripped Engine) 5.58	.50	.387	
Engine D	117 at 2200 RPM 317 cu. in.	6.5**	.50	.369	
Chrysler Model Ind. 24A	128 at 2200 RPM 331 cu. in.	6.1**	.50	.387	
Engine E	97 at 2200 RPM 372 cu. in.	(Complete Engine) 12.85	.58	.260	
Chrysler Model Ind. 24A	128 at 2200 RPM 331 cu. in.	(Complete Engine) 6.6	.50	.387	

*Information not available at 2200 RPM **Complete engine less flywheel housing

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PERSONAL BUSINESS

BUSINESS WEEK

JAN. 29, 1955



Carrying insurance against loss from hazards of running your home and personal life is considered sound practice. But the variety of policies available today makes it hard to figure out whether you have enough, too much, or even the right kind of coverage.

Here's a check list to serve as a general guide to the most popular types of basic protection, whether you own or rent your home or apartment. It includes only property insurance, legal liability, and illness—not life insurance.

Basic protection on your home, of course, is fire insurance. If you're the owner, have an appraiser give you the current market value of your house alone—not including the land. Then get insurance at that value, plus the value of the house's contents. If you rent, concentrate on the value of the contents you own.

In either case, here's an important reminder: Check the amount of your fire insurance at least once a year. With the rising cost of building repairs and furniture replacement, you may not be carrying enough.

It's sensible to have so-called "extended coverage insurance" as a supplement to the fire insurance on your buildings. It costs little, protects you against losses from windstorm, cyclone, tornado, hail, explosion, riot, aircraft, smoke, vehicles, and like hazards.

You can go even further, and take out rental insurance. This becomes effective if your home is damaged to such an extent that you have to move out while repairs are being made. It pays rent for temporary quarters as well as some other living expenses.

On furnishings: Best way to keep the value of the contents of your home up-to-date is with a household-inventory booklet. You can get one from your agent or broker.

In making the list, you might find that the value of these furnishings—plus the value of other personal belongings—adds up to \$10,000 or more. In such a case, consider a personal-property "floater." This is a broad enough policy to cover personal property of all members of your family, on or off your premises. Coverage is for all risks, with certain limitations.

How about theft insurance? You may find the personal-property floater adequate. If not, you can get specific theft insurance, either in a so-called broad form or as a "limited" theft policy, according to your needs.

Don't overlook comprehensive liability insurance. Accidents to persons on your property can cost you a small fortune—unless you're covered against it. For home owners, the cost is reasonable and the coverage broad. The policy covers your whole family against liability claims resulting from:

- Accidents in your home or on your premises.
- Sports accidents.
- Accidents caused by personal act, whether you are at home or away.
- Damage caused by children or pets.

The cost varies according to the amount of liability you want covered. The basic premium, with a \$10,000 limit for each occurrence, is about \$10.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
JAN. 29, 1955

Check up and find out exactly how much of the cost of illness your hospitalization and surgical insurance will pay for you and your family. You will probably find it advisable to supplement this with one of the many forms of accident and sickness insurance.

These health coverages will pretty well round out your program of insurance protection against family illnesses. But you may want to make it more extensive by adding disability insurance. If your income stops because of accident or illness, this coverage pays your living expenses.

Remember that this is only a broad guide to your personal insurance requirements. What you will buy will depend most on what you decide you most need—and whether you feel it's worth-while. A good insurance agent or broker can be a big help in making your decision.

You can still get accommodations in New Orleans for Mardi Gras (Feb. 18-22). Better hotels require a five-day stay, insist on cash in advance—and will run between \$100 and \$150 for the five days for two.

Motels with comparable facilities run about 10% less. So do some hotels out of town, on the Gulf Coast—but you'll lose most of what you save because of travel back and forth to the city. Another good bet is the nicer private homes in town, which rent rooms for a minimum of three nights. New Orleans Chamber of Commerce will send you a list of them.

Better restaurants in the French Quarter include Antoine's, Brennan's, Galatoire's. Uptown, try Commander's Palace, Turci's, Manale's, Pittari's, Sclafani's, and Charley's Steak House.

Bourbon Street night spots don't jack up prices for Mardi Gras. Drinks at bars run 40¢ to 70¢ apiece on an average. But you pay up to \$1.65 per drink at a band or expensive floor show.

Leave your Scotch and Bourbon at home and enjoy cocktails like the Sazerac, absinthe frappe, Ramos gin fizz in The Hurricane (and its minor counterpart, The Squall). Remember the word "cocktail" was coined in New Orleans.

The only way to participate actively in the Mardi Gras itself is "to mask." With masks on, say Orleanians, "Everybody's friends and nobody's a stranger." You can get out in the street and join the fun.

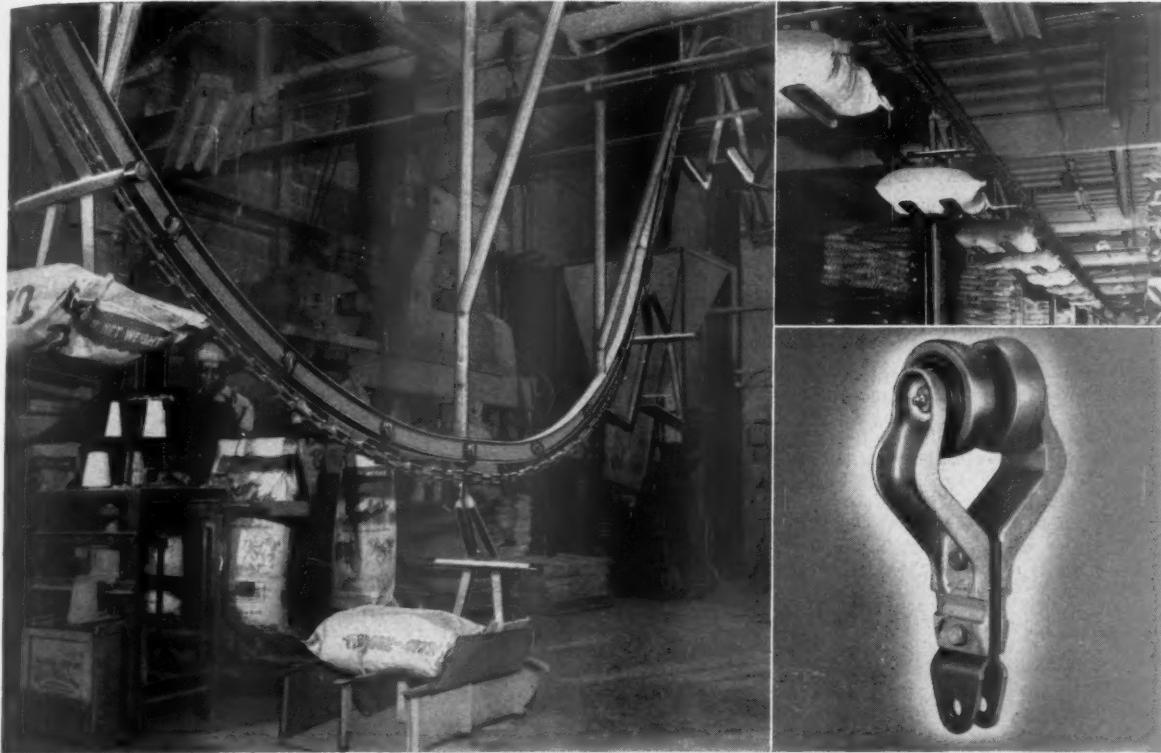
If you don't plan to mask, they advise that you stay home and watch Mardi Gras on TV.

Your travel agent now has a free booklet called: Europe—Major Events. It is a complete list of all outstanding attractions scheduled to take place in 21 Western European countries between now and September.

Auto engineers are working on ways to increase your gas mileage—but say they are still some distance from a solution.

Biggest gas loss comes in deceleration from high speeds. Studies show that as much as 60% of the supplied fuel may pass through the engine unburned. Theoretically, one way to stop this would be to shut off the fuel supply temporarily during deceleration.

Engineers say that a reduction of 3% in gasoline consumption would save the motoring public as much as \$400-million a year.



Large feed warehouse uses 858-ft. Link-Belt Overhead Trolley Conveyor system to handle 25,000 lbs. of feed per hour. At left, two-fingered carrier dips, picks up bag, continues to one of seven rail loading stations or separate truck dock. There's no floor congestion as bags move through

warehouse to dock (top right). Also shown is the new, highly efficient and long-wearing Link-Belt ball bearing trolley—now available for new conveyor systems and replacements. It is made in bolted or riveted models in popular sizes.

Link-Belt Overhead Trolley Conveyors coordinate production operations, allow processing in transit, provide fast, low-cost materials handling

Old and new plants are today achieving impressive savings in materials handling through installation of mechanized conveying systems. And Link-Belt Overhead Trolley Conveyors are a popular answer for many who are seeking the benefits of this method of handling. With a variety of available attachments, they can provide pickup of materials . . . allow processing while en route to storage or shipping—all with no demand on valuable floor space. Such continuous operations can even involve several floors of the same building—or separate buildings.

Besides a new, advanced trolley design, Link-Belt offers you other vital cost-saving advantages. Materials handling is a Link-Belt specialty—and a system planned for you is evolved from long experience. And in an

installation that must move upward, downward, to either side—close to the ceiling for headroom or down to a working area—that background is certain to pay off in greater design efficiency.

In fact, whatever you need in materials handling or power transmission, Link-Belt offers you unmatched breadth of line and depth of experience. Call your nearest Link-Belt office for details or write for Books 2330 and 2536 to LINK-BELT COMPANY, Dept. AV, 307 N. Michigan Ave., Chicago 1, Illinois.

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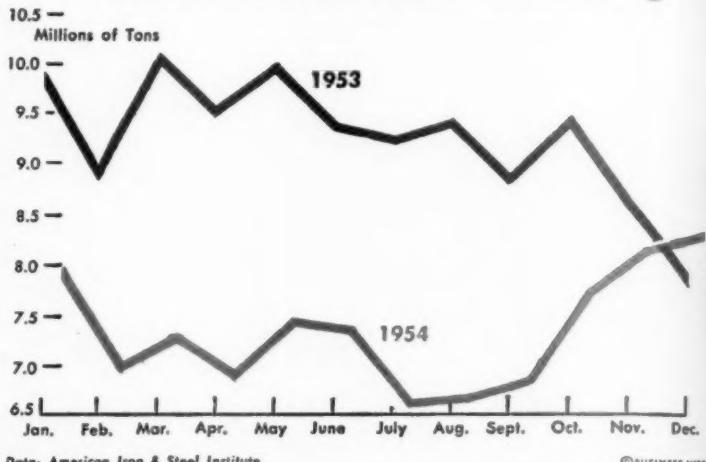
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CHARTS OF THE WEEK

Steel Production Climbing



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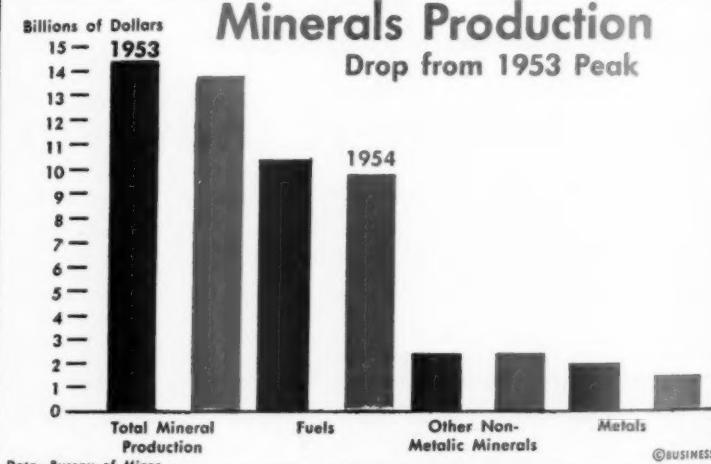
Fourth-Quarter Comeback

December steel production reached 8,281,000 tons, topping the year-ago month. It is the industry's best month since November, 1953, and brought the fourth quarter to 24,071,960 tons, highest for the year.

In 1953, steel output slid from 100% of capacity (and a tonnage of almost 29-million tons) in the first quarter to 88.1% in the fourth, with December

clear down to 79.7%. The downtrend that appeared in the summer of 1953 did not definitely reverse itself until 16 months later. Then steel output jumped 13% between September and October, with consumers beginning to replenish the inventories they had been nibbling at for a year, and auto makers calling for more steel as production of their new models started to roll.

Minerals Production Drop from 1953 Peak



©BUSINESS WEEK

Off 4% in a Year

Although the total value of minerals produced in the continental U.S. declined about 4% in 1954, the year was still the second best in history, accord-

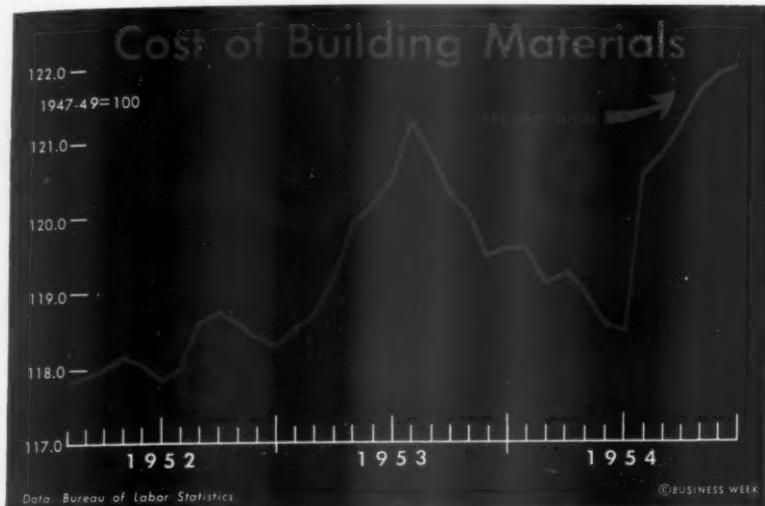
ing to the Bureau of Mines.

There was a 3% decline in the value of fuels output. Coal production was down almost 14%. The value of crude

petroleum production actually exceeded 1953 because a price increase overbalanced the decline in volume of production.

Production of titanium and bauxite

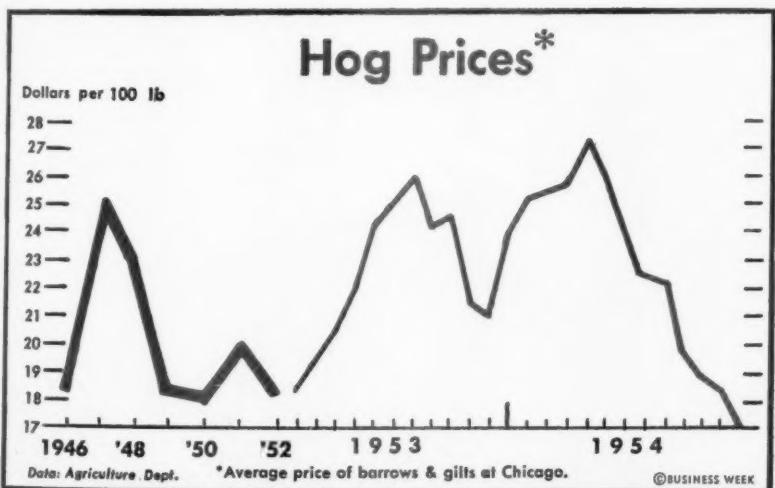
increased in 1954, and primary aluminum set a record. Substantial declines were recorded for zinc and lead. Cadmium production also declined around 5%, but continued in oversupply.



The Highest Prices Ever

The cost of building materials reached a record height in December, 1954, according to the wholesale price index of the Bureau of Labor Statistics.

(BW-Jan. 22 '55, p26). This peak was sustained by a strong demand for lumber at year-end. Prices of sand, gravel, lime, and softwood are also up.



Prices Down After Peak

Hog prices tumbled 37% from April to December, 1954 (above). For two years, hog production had been low, prices high. Then came large supplies

of corn, and more farmers decided to raise more hogs. Thus, the 1954 spring pig crop was 13% greater than a year before.



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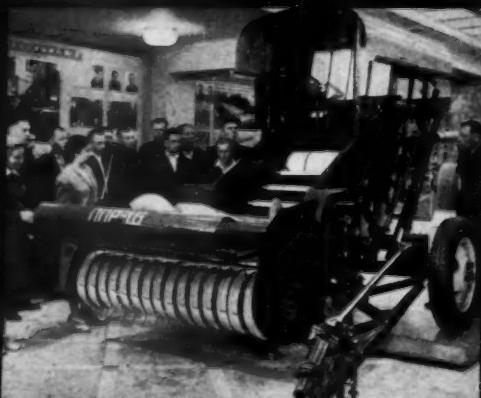
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Russian Industry: An Inelegance

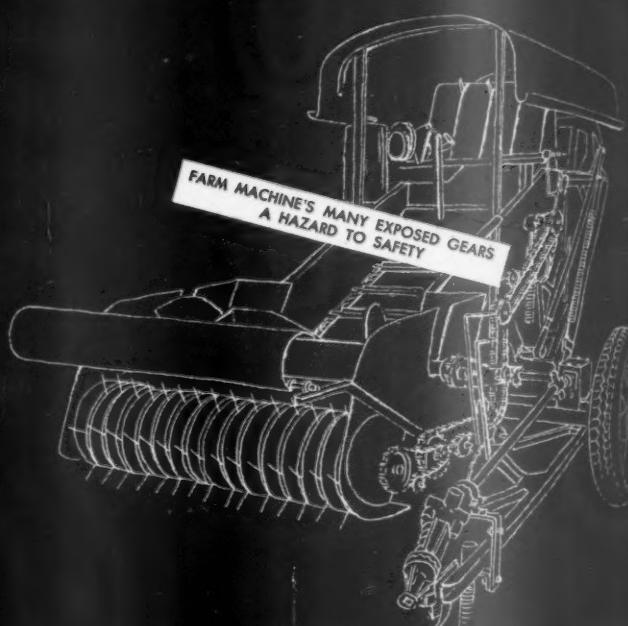
Russian industry has one dominant goal: to increase output. To a Russian production boss or engineer or plant planner, hardly anything else matters. A Soviet product is designed and built so that it does its basic job—seldom more. Styling and appearance are relatively unimportant. Extra margins of safety are neglected. The idea is to get the product built—as quickly and cheaply as possible. Pictures on these and the following pages show the results of that philosophy. For a deeper look at Russian industry—its nature, its problems, its potential future—turn the page.



The Russian mining industry uses this heavy dump truck. It's powered electrically—unlike similar trucks in the U.S., which are diesel-powered.

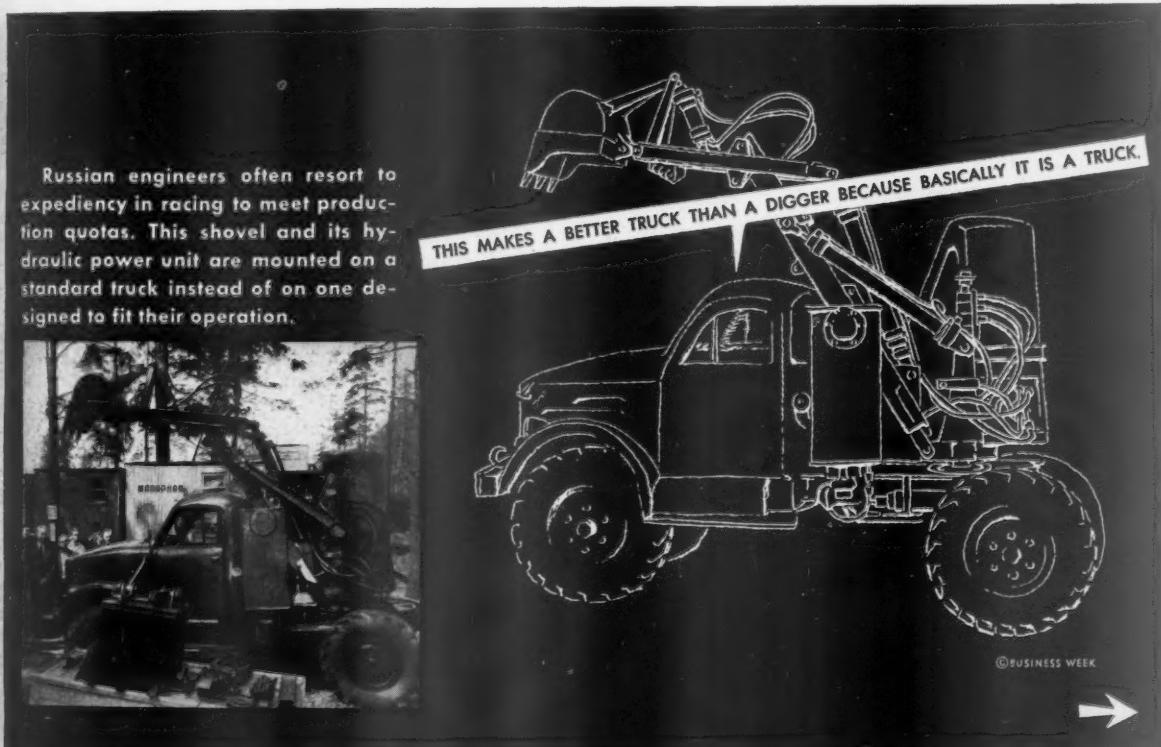
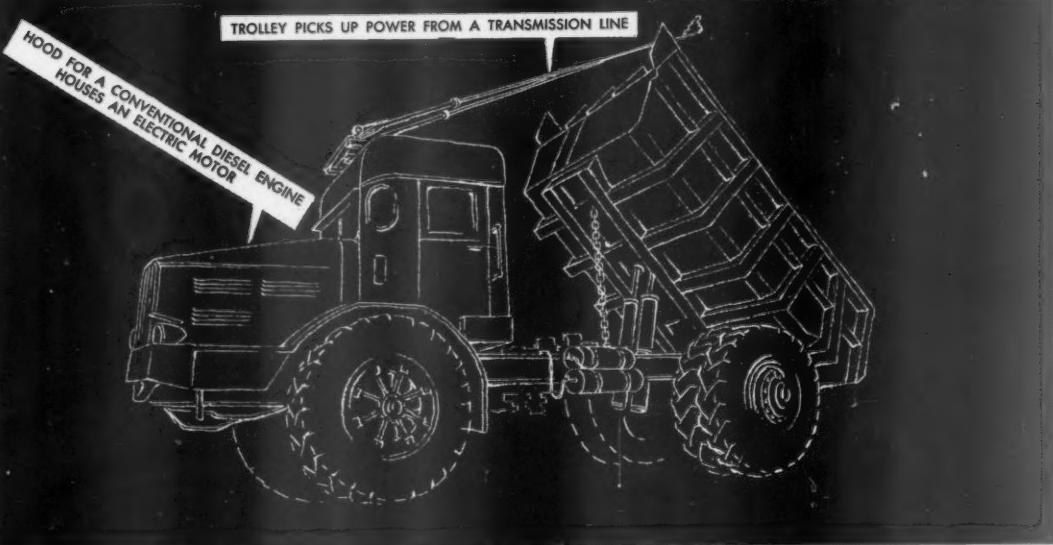


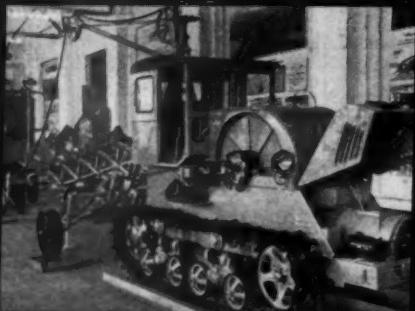
Personnel safety doesn't usually get much consideration in Soviet product engineering. The gears and chains on this hay baler, not covered by a shield, can cause serious injury.



S TO EXECUTIVES ON:

Japan and Single-Minded Giant





In the foreground is a small electric-powered tractor, in the background a mobile step-down transformer. Tractor and transformer are connected by half a mile of cable, stored on a revolving wheel in the tractor.

BIG REEL CARRIES POWER CABLE TO RUN ELECTRIC MOTOR



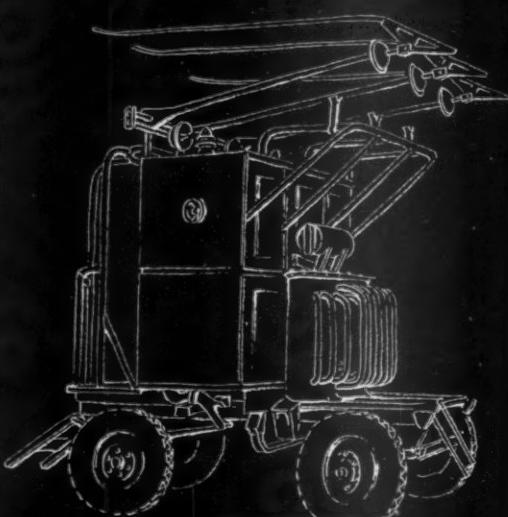
A Ruthlessly Practical Industry

(Story starts on page 144)

These mobile transformers tap high-voltage transmission lines, step the voltage down so it's suitable for tractors and trucks. Such equipment is probably more costly in the long run than diesel fuel storage facilities.



THIS TRANSFORMER HAS MOBILITY FOR USE ON BIG COLLECTIVE FARMS



The administrators of Soviet Russia started in October of 1917 with a revolution, a huge hungry population, and a vast reach of cold, largely unproductive land. They have now built their colossal piece of emptiness into an industrial giant second only to the U.S. Their steel production, for example, is not half the U.S.'s—but it is about twice Britain's, the third largest producer.

• **Something Else**—Industry grew up in Russia under conditions very much different from those under which, for instance, U.S. industry grew. The entire economic environment was different—and still is today.

Observers in the Western world know this much. They also know that Russian industry is big. This is all fairly general knowledge.

Only a few men in the West, though, know what Russian industry is really like. The "how" of Russia's shift into high gear is a mystery to most foreigners, and especially to industrialists of the U.S., its real big competitor. Only a few U.S. business people can pass as qualified students of Russian technology. And in recent times, our own military has shown a kind of desperation in its hunt for data on Iron Curtain aircraft.

Since the environments of U.S. and Russian industry differ, it's logical to suppose that the industries themselves

differ, too. But in what ways? Is Russian industry more efficient, or less? How do its products stack up against American products? How about its management? And its basic philosophies and goals?

A BUSINESS WEEK technical editor went behind the Iron Curtain in recent months to find out. He started his research at the Leipzig Fair (BW-Sep. 18'54, p168), the annual trade show that the Communists have seized upon as a propaganda medium. From there he branched into other lines of inquiry. He talked to industrialists, closely examined Communist products of all kinds, from toasters to oilfield drilling rigs. He came back through the Iron Curtain with a mental picture of the products and processes, the philosophical background, the tone and makeup of the Soviet industrial machine.

• **Balance Sheet**—In brief, the main points of difference between U.S. and Russian industry are these:

Basic thinking. U.S. industry works mainly for the consumer. Russian industry works mainly for the military, and for itself. It makes guns and tanks, and it makes industrial equipment. The Russian consumer gets what is left over.

Management. U.S. industry can be called a machine only in the broadest sense; it is a complex of independent units. Russian industry is truly a machine; its units are controlled by one great board of directors in Moscow. This forestalls duplication of effort as it occurs in the U.S., where it's common for several competing plants to spend money on research and development of the same type product.

Engineering and production. Russian plants, which are all part of the same big company and which do not compete for the consumer's favor, are not interested in quality as much as U.S. plants are. They are interested, above all else, in quantity—in meeting output quotas. They can afford to neglect the extra margins of strength, power, and safety that U.S. engineers design into their products; they can afford to use unskilled workers where a U.S. plant would demand skilled workers; they can afford to overlook poor workmanship.

Products. Russian goods, as a result, are generally inferior to U.S. goods. They are less carefully made, less attractive; they seldom carry extra refinements of comfort, easy manipulation, or other advantages that U.S. manufacturers stress. They do what they have to do, seldom more. There is little love, pride, or gentle care in them.

However, nobody is foolish enough to think that Russians are clowns when it comes to making things. U.S. soldiers who have fought against Russian-made equipment in Korea can testify

to their deadly practicality. Their ability to make military goods transfers over to many of the heavy industries lines, too. The one area where they look the worst is in consumer goods—light durables and nondurables.

Products

The airport at Helsinki, Finland, is a major jumping-off place for points inside Soviet Russia. It is also a showcase in which the colorations of American and Russian business are displayed side by side, in a single sharp contrast.

At this ramp, Pan American World Airways brings in a load of passengers from Western Europe. The plane is a Stratocruiser, sleek, shiny, meticulously groomed. The pilot steps out; both he and his uniform are as smart as the Stratocruiser.

At that ramp, Aeroflot brings passengers in from Moscow and Leningrad. The plane looks something like a cross between a DC-3 and a DC-4. It is streaked with oil and grease. The pilot has not shaved. The copilot wears a soiled shirt and jacket, and no tie.

This is typical of Russian industry. The plane is considered to have done its duty by flying from Moscow to Helsinki, the pilot to have done his by managing the plane. Nothing else appears to matter. There is no attempt to make either plane or pilot do more than is absolutely necessary.

• **Cars**—Helsinki provides some other contrasts between U.S. and Soviet business—contrasts telling the same story told at the airport. Take automobiles, for instance. Helsinki is a fairly big market for Russian, Czechoslovakian, and East German makes of cars, which roam the streets alongside British and American models. Of all Finnish car imports in 1954, 70% came from Communist countries. Even so, these cars are quite unpopular and considered to be of poor quality. The Z's, pride and joy of Russia's auto-makers, resembles a 15-year-old Packard. It has neither the clean, utilitarian lines of its British counterparts, nor the plush luxury featured by Detroit. It has the tired, discarded style of the late 1930s. Passengers are cramped for space inside. On any but the smoothest highways, the car jolts and bounces.

The Czechoslovakian cars are engineered poorly—even dangerously. This was demonstrated not long ago at Helsinki, when a Czech car swerved to avoid hitting a truck and ran into a ditch. On impact, the car exploded, killing all four passengers.

The East German cars are probably the best of the three. Their engineering is sound, and their styling shows care. But some of the raw materials are inferior by U.S. and British standards. Plastics are used sometimes where

an American engineer would have specified metal.

• **Fifth Avenue**—The Soviet products displayed at the Leipzig Fair gave Western observers the same impression of sullen, uninterested workmanship. Amid the breathtaking, ultra-modern architecture of the Leipzig pavilions, observers had the feeling they were looking at very ordinary products inside a swank Fifth Avenue store.

Russian toasters, for instance, would not interest a modern U.S. housewife. They are 1935 vintage. They toast only one side of the bread at a time. The housewife must turn the bread slices herself and time the operation herself. Like the Aeroflot plane and pilot, the Russian toaster does its basic job and calls it a day.

Russian laundry irons are the same. They lack thermostatic controls. Built-in steaming devices are apparently unknown to Soviet housewives.

Or take radios. One particular model of Russian table-top receiver comes in two styles: simulated mahogany in lines awkward and heavy by U.S. standards, or a plastic color combination of chocolate brown and light lavender. This model is priced beyond the reach of the average Russian consumer.

His radio can receive in only two wavelengths. Instead of the fine-tuning dial that's standard on U.S. radios, it has merely a two-position switch. This may be the result of political as well as manufacturing expediency. One export-import man, looking at the Russian consumer's radio, remarked, "You have a choice of two stations: Moscow Radio or Radio Moscow."

• **Big Ticket**—Soviet industrial and military equipment is often made with more care than Soviet consumer goods. But it, too, generally fails to measure up to Western standards.

A big steam turbine, designed to run an electric generator, attracted the attention of Western observers at Leipzig. Its crude construction would have frightened a cost-conscious engineer from General Electric, Allis-Chalmers or Westinghouse. By U.S. standards, the blades of such a turbine would have a satin-like finish. The one displayed at Leipzig had blades made from rough castings and finished by a rough grinding job.

When this turbine goes to work in a power plant, it will cost its owners money. The gravel finish of the turbine blades will cause a good deal of friction. The friction will lower the efficiency of the whole engine; the turbine will consume too much fuel and put out too little power.

• **Quality**—There were some exceptions to the mediocre quality of Soviet goods at Leipzig. The Russians showed small-screen television sets that seemed well built. However, only the Russians knew

"... catch-as-catch-can methods to duplicate almost overnight the mass-production techniques of Detroit . . ."

SPECIAL REPORT starts on p. 144

how well these sets worked. There were no piped-in test patterns to prove the TV picture good or bad. And the salesman on duty, to the bafflement of interested Westerners, spoke only Russian.

The Red Chinese at Leipzig displayed medium-powered radio transmitting tubes that also seemed of good quality. However, a close examination showed them to have been made in the U.S. They were probably war-surplus goods that found their way into the black market.

• **Price**—The outstanding complaint of Western businessmen at Leipzig was that the prices of Soviet goods were too high. This was partly because of a currency exchange unfavorable to Westerners. (A modest lunch behind the Iron Curtain costs a U.S. businessman twice what he would pay at New York City's Stork Club.) But Russian products would be high-priced even without an unfavorable currency exchange rate.

The Russians have some traits that, to a certain extent, make up for the high prices of their goods. Western businessmen who have dealt with them say they are faithful, though not prompt, in delivering orders. They like to settle deals with cash on the line. They never ask for credit, and they never need badgering to close out an overdue account.

The satellite nations are not so businesslike. Chances are, one Western buyer says, they won't give you a confirmation of your order. Deliveries are sometimes as late as three to six months. And the shipments, when they finally come through, don't always meet your specifications.

Basic Thinking

The singleminded purpose of Russian industry is to increase the quantity of its products. Every segment of the industrial machine, every plant, every team of workers has its output quotas. Russia's leaders, who started with several million square miles of almost nothing, are bent on filling the emptiness as fast as it can be filled.

With almost frantic haste, the Russians have put everything they have into a colossal muscle-building program. The goal of this program is to make Russia's military and industrial strength equal to, and if possible greater than, that of other powerful nations. The program has drawn on all the ingenuity of both Russians and Westerners. Soviet planners have bought the help and guidance of foreign engineers. They have boldly copied whole designs from

Western products. They have used catch-as-catch-can methods to duplicate almost overnight the mass-production techniques of Detroit. It has all been done in a desperate hurry, as though the final test of this growing machine were always only a week away. Production bosses unable to keep up with the pace have seldom held their jobs for long.

• **Results**—And today, the once gaunt, big-boned country bulges with solid muscle. In the past 25 years it has multiplied many times its output of coal, steel, oil, electricity, and aluminum. Its military-industrial power ranks second in the world.

Russia's leaders intend to try for first place. And observers who have compared Russian plants to Western ones state that the U.S.S.R. is capable of getting there, but not all across the board. In some fields, Russian war capacity, plant for plant, is greater than that of the U.S., say European engineers who have seen similar plants in both countries. Given the same floor space and manpower, a Soviet tank plant can out-produce a Western plant. The reason is that the Russians often value output above quality, firepower over personal safety. Or they get higher output another way: Lately, Russia has made heavy purchases of light and medium merchant ships on the Western markets. That leaves its domestic shipyards free to build more navy shipping as a backlog for the future.

• **Weapons**—This is a matter of stated policy, of cold calculation. Take Russian tanks, for instance. In World War II, Russian ordnance experts found that the average life of a tank in battle was about seven and one-half combat hours. From then on, manufacturing plants were asked to build tanks just good enough to live out that average life.

The plants did so: Accurate templates for cutting hatch ports were replaced by free-hand drawings in chalk. Quick welding jobs patched up cracks in castings for gun turrets. The tanks were given no interior heating systems to keep the troops warm. The Russian high command asked only that the weapons killed.

Russia's best jet aircraft, the MiG-15 of Korea fame, tells the same story. It is fast and maneuverable and deadly. But provisions for the pilot's safety and comfort are largely neglected. The inner components are of top-notch quality where they have to be; where they don't, they aren't. The plane is designed to kill during the short service life allotted to it by the Soviet actuarial tables.

After that, apparently, it may fulfill its destiny by quietly falling to pieces.

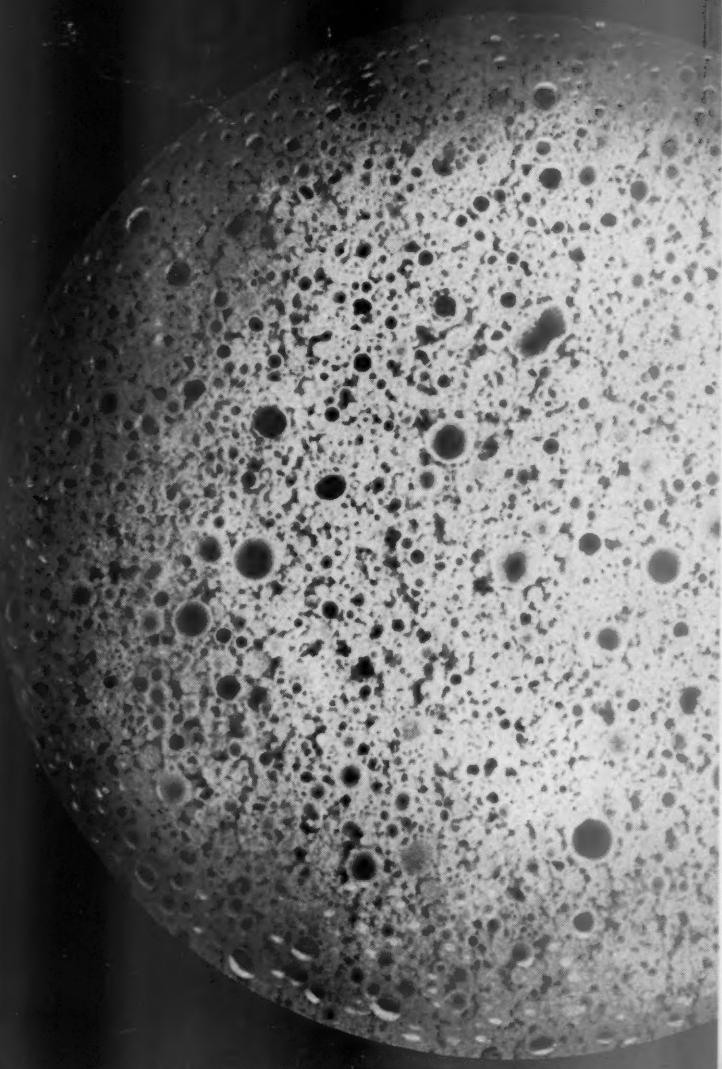
All this contrasts sharply with the thinking in the Pentagon. U.S. military planners believe that quality, as well as quantity, gives a fighting force an advantage. American planes and tanks are built to live past their actuarial expectancies. In the military field, though, the Russians are extremely fussy about two items. Quality is a must as far as atomic energy and guided missiles are concerned.

• **Drawbacks**—The Russian emphasis on quantity rather than quality has led to many troubles in Soviet industry. Low quality equipment needs much more maintenance and more frequent replacement than equipment of high quality. As more and more products pour out of Russian factories, the maintenance and replacement problem will get steadily more formidable. It will siphon off money and labor and technicians that Russia would doubtless prefer to use in the buildup program.

The unhappy results of hurried workmanship are undoubtedly harrying many plant bosses in Russia already. For instance, consider the possible history of the big steam turbine shown at Leipzig. Perhaps it will be installed to produce power for an aluminum plant somewhere behind the Iron Curtain. Even before it begins to need replacement parts, it will give the plant manager trouble. With its gravel-finish blades, a result of hurry, it will fail to produce power efficiently. This will make it harder for the manager to meet his quotas. But since he, too, is in a hurry, he may not be able to afford the down-time necessary to get the turbine improved. He will be stuck with an uncomfortable dilemma. And he may be hampered in much the same way with machine tools, stamping presses, or mining machinery.

Another result of the emphasis on output is that, quite often, Soviet planners try to make plants and machines and men do more than their capabilities really allow. "Russian engineers are driven by a kind of megalomania in their plant planning," one U.S. government analyst has said. The results are often time and money wasted.

Russians have grandiose dreams, for instance, in connection with their iron and steel industry. They have tried nearly doubling what Western engineers consider the practical limit of blast furnace capacity. Most technical men will tell you that for blast furnaces, as for many other devices, there is an optimum size. If you stray up or down very far from this optimum, the device loses efficiency. If you stray too far, it may not work at all. By Western European and U.S. standards the practical capacity for a blast furnace is 200 to 250 tons. The Russians have tried



Craters on the moon?

No, they're bubbles made of ALCOA Alumina by The Carborundum Company

Illustrated above is a cross-sectional view of something new in lightweight refractory material, a castable high-temperature cement made from ALCOA Alumina by The Carborundum Company, Perth Amboy, New Jersey. It's one of the world's best insulators in the upper temperature ranges of furnace operations. Mixed with water, the castable containing these pure alumina bubbles can be poured, begins to harden almost immediately thereafter.

Because ALCOA Alumina is so highly refractory, these cements withstand from 2800° to 3100°F depending on the type used. And, because ALCOA Alumina is one of the most stable and inert materials in existence, these cements show

little or no shrinkage even at extreme heats . . . are inherently resistant to furnace atmospheres and combustion gases. Further, because of dead air space in the thousands of tiny alumina bubbles, you get an excellent insulator, one that lets a furnace heat up fast.

Carborundum finds that alumina bubbles can be used almost anywhere you need a top-quality refractory with the convenience of a castable. Back-up linings for nonferrous melting furnaces . . . burner blocks for core ovens . . . boiler furnaces . . . malleable annealing furnaces . . . side-wall back-ups. These bonded alumina bubbles are also offered as prefired brick and in special shapes.

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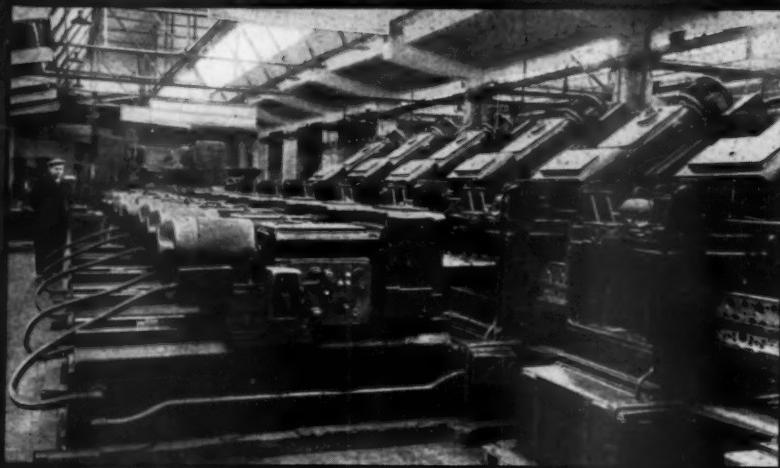
performance at higher operating temperatures, look for refractories containing ALCOA Alumina. You'll find they last longer, require fewer tear-downs, are actually most economical.

ALCOA does not make refractories, but we will gladly discuss with you the properties and characteristics of the various ALCOA Aluminas. Write to ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-A Alcoa Building, Pittsburgh 19, Pennsylvania.

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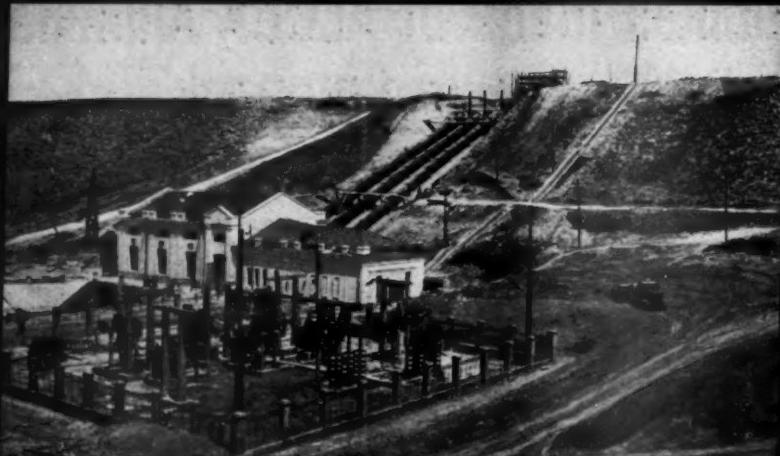
The Ideas Be



Automation can help Communist countries overcome many of their industrial ills. This transfer machine, which works on cylinder blocks for heavy engines, helps (1) increase output and (2) make up for a lack of skilled workers.



Steam engines are the rule, diesel engines the exception, on Russian and satellite railroads — despite the savings inherent in dieselization. Russia's problem is that it sometimes has difficulty transporting diesel fuel.



This is a small hydroelectric station built to supply power for nearby collective farms. Difficulty in transporting diesel fuel has spawned many such stations in Russia — and is a reason for the electric truck on page 144

Behind Soviet Goods

nearly doubling that output in one of their furnaces. There is little evidence, however, that it has paid off for them. They first tipped off their plans by trying to buy bigger-than-usual furnace-blowers in the free world market. There is little evidence that the Russians' attempt to prove this theory wrong with blast furnaces has paid off.

• **Education**—Probably the most promising cure for these ills of Russian industry lies in education. Technical education will help improve the quality of products, bring plant outputs up closer to their designed capacities, and provide more personnel at top levels.

The 1917 revolution temporarily weakened Russia's educational system, especially engineering schools. There was a happy-go-lucky mood in the system when the 1917 freshman class entered the universities. Part of that generation later became the faculties of today. Indirectly, that has accounted for some of the engineering bugs and kinks in industry. Moscow cracked down on the post-revolution laxity shortly before World War II. But the drive didn't really get rolling until after the war. So, it's difficult to measure yet the ability of the first post-war graduates.

Russia is seriously troubled by a shortage of engineers and skilled production workers, and is working hard to alleviate the shortage. In the years 1951-1953, Soviet schools have graduated an average of 38,500 engineering and scientific students a year—as against 29,000 in the U.S. Last year, there were 50,000 graduates from Soviet schools, compared to about 19,000 from U.S. engineering colleges. It's typical of Russian thinking that these students get little of the cultural trim common in U.S. technical education. Right now, the U.S. has some 500,000 engineers and 200,000 scientists, against Russia's 400,000 and 150,000.

The Russian students graduating today may not be really good engineers. Their teachers are largely products of the lax post-revolutionary years in Russian universities. But a new crop of teachers, educated in more serious-minded times, is now coming in. Many Western observers figure Russian technical education will get steadily better from now on.

Last summer, Nicholas DeWitt of Harvard University's Russian Research Center released a study on Soviet professional and scientific personnel. His analysis of Soviet statistics shows the average age of a Soviet professor is about 54 years, and 46 years for an assistant professor. DeWitt feels that

implies the leading faculties over there are due for a big turnover in the near future. In any case, today's graduates are about to get some more training in industry. Given 10 years on the job, they should turn into competent, possibly above-average engineers.

Engineering & Production

The industry to which the classes of '54 are now being introduced is full of challenge for a bright young engineer. Sweating to keep up with output quotas, Russian production bosses are in constant need of engineers to keep the goods rolling, to make them roll faster if possible, to guide them around snags that constantly develop in the frenzied race for output. The Russian high command needs engineers to improve products, to adapt them to new uses, and to develop machines to produce them.

The engineers' job isn't easy, for the industry they are working with has basic drawbacks. Because of the emphasis on quotas, Russian plants have had to use unskilled labor in vast quantities—including women and teenagers—for there isn't enough skilled labor to go around. This has lowered productivity, efficiency, and product quality. An engineer may design a fine machine, but when it finally comes off the assembly line, it is roughly and carelessly built.

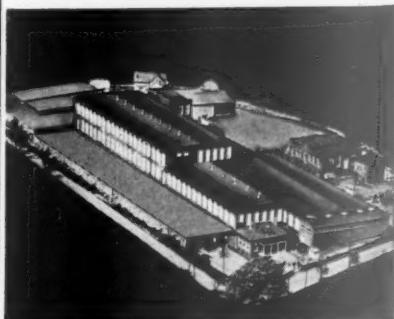
The assembly-line engineer may be sorry about this, but there is little he can do. His job is to keep the line moving. If there's an error somewhere in the production process, he sees that the product is patched up by handyman techniques. This gets the product out of the plant, satisfies the quota. The only exceptions to this output-above-all thinking are atomic energy and guided missile plants, where tolerances are close and quality is a must.

• **Adaptations**—The same kind of expediency shows up in Russian designs and re-designs. In an unorthodox way, a Russian engineer sometimes revamps a tried and true machine to fit the conditions of the end use, or to get rid of inadequacies in the machine. He is driven, as always, by the tearing hurry of the Soviet industrial buildup. His ideas, though they may involve a complex technology, are often childishly simple.

• **Trucks**—Russian engineers show unorthodox thinking in designing workhorse vehicles. Truck production is limited to about 18 different models, each powered by one of five standard engines. In agriculture there is one standard small-sized tractor of around

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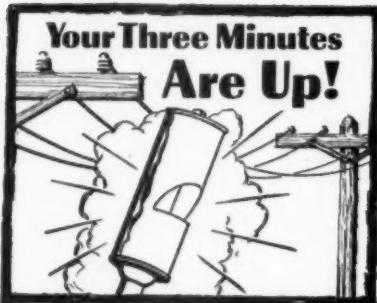
One of many good reasons why electronics and electrical products companies are locating and expanding in North Carolina—the South's leading industrial state—is shown in this comment by Pyramid Electric Company:

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Cooperative North Carolina workers are helping other companies, too, to achieve excellent production and resultant low unit costs.

A pamphlet "The ELECTRONICS and ELECTRICAL PRODUCTS INDUSTRY in North Carolina" covers the growth of the industry in this State. For a free copy, write Ben E. Douglas, Director, Dept. of Conservation and Development, Raleigh 4, N. C.

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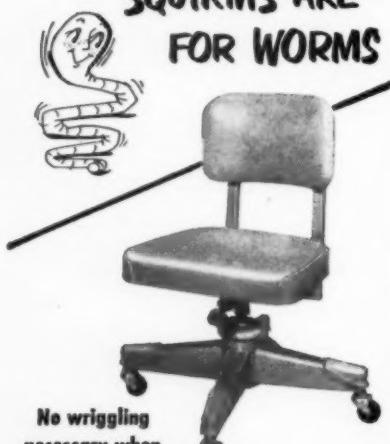
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60 hp. In some Iron Curtain areas, trucks and tractors are powered by electric motors instead of the more usual diesel engines. One heavy-duty dumptruck gets its power through an overhead trolley running on cables, much like the trolley cars that used to abound in U.S. cities. This dumptruck, used for mining, is similar to the Euclid model made by General Motors. A small Russian farm tractor is equipped with a revolving drum that reels out half a mile of electric cable. The cable delivers power to the tractor from a medium-sized stepdown transformer connected to a transmission line.

Why the electric motors? Again, specialists say, it's a matter of expediency. Observers of the Soviet scene say the Russians lack rail, road, and water transportation facilities to carry diesel fuel to many economically important areas.

Putting up a small power station at a mining or farming site is a short-term project that gets your operations rolling fast. Road or rail construction is a long, expensive job—especially in so big a country as Soviet Russia.

Another probable reason for the truck and tractor redesign is that the Russians may be trying to conserve diesel fuel in domestic use. Quite possibly they prefer to sell it in the outside market where they have been strong lately. The profit in rubles, however, would hardly cover the costs of vehicle redesign.

Expediency is the basic philosophy behind many other Russian developments. For instance, there's a small power plant mounted on a trailer; it makes quick trips to areas that develop a sudden power shortage. There's also a medium-sized planing mill mounted on wheels; it can be moved around a plant—thus giving flexibility to production planning.

Highly specialized machine tools are stocked at a central warehouse in a tool-deficient area. A nearby plant can then requisition a particular tool for a particular job.

Electric-powered tractors and mobile machine tools are not the best possible solutions to their respective problems. But they are quick solutions, cheap solutions. They work well enough. This is Russian industry in a nutshell.

• Copies—Though Russian engineers are often quite original thinkers, they are not hired principally for that trait. A Russian engineer is often asked to improve or adapt a product, but much less often to develop a new one. Russian manufacturers don't compete as U.S. manufacturers do; they aren't continually searching for new products and new twists to give themselves an edge in the market. For that reason, there has been no flurry of growth

products—plastics, synthetic textiles—behind the Iron Curtain.

But Russian industry as a whole is in competition with industries of the West. It is desperately trying to catch up with them. With typical Russian logic, which brushes aside almost all considerations but that of usefulness, Soviet industry is furthering its cause by copying Western products.

In many important industrial fields, the Soviet Union maintains complete research operations to procure foreign equipment, strip it down, find out how it works, and draw up blueprints for its manufacture by Russian industry. Some U.S. products have become standard in Russia. One tractor, originally built by Caterpillar Tractor Co. and sent to Russia on lend-lease, has been adapted to Soviet manufacturing methods and is in wide use behind the Iron Curtain today (BW-Jul. 14 '52, p.39).

The Russians rarely try to improve on a pirated product. When they find a good thing, they stick to it. Where high quality isn't necessary for their purposes, they will degrade some parts of a copy. And they occasionally tinker with a copy to get better operation under local conditions—perhaps redesign a lubricator so that it works better in cold weather. But, in general, the product's original manufacturer can recognize the Russian version easily enough.

Western engineers often snarl at this piracy, but they seldom sneer at it. It is not easy to translate a product from the terms of one nation's industry to those of another's completely different industry. In cases where Russian engineers work from a Western blueprint, for instance, they have an unbelievably difficult problem in visualization. The standard Russian blueprint looks at a machine from one point of view, the standard U.S. blueprint from another.

• Original Work—None of this means, however, that Russian industry is incapable of putting out original developments. It means only that, most of the time, Russian industry doesn't want to bother; it is in too much of a hurry. When it does want to bother, its capacity for research and development is probably as good as that of any other nation.

When does it want to bother? Only when there's a need to create a product for a priority application. Atomic bombs, for instance. And transistors, for use in guided missiles and aircraft equipment where miniature circuits mean a saving in space and weight. By contrast, it's doubtful that Russia will expend much energy in developing nuclear power or transistors for consumer applications. Not so here. Bell Telephone Laboratories, Inc., originally



The Charm of Booie, The Witch Doctor

Booie, the Kaffir witch doctor, didn't want to part with the charm. Often he had made big magic with it in his ceremonial dances and without it he might lose face. And, didn't it have miraculous powers?

Schalk van Nieirk, the old Boer trader, thought so—at least it had the power to make him a very wealthy man, for this pebble was four times the size of the one he had sold two years before.

So, all day long they haggled and Schalk brewed pot after pot of Dutch coffee, heavy with sugar, well flavored with a magical potion from a stone bottle and served it with the free hand of a man who feels a fortune tickling his fingertips.

Finally, he stood up, stamped out the fire and said, "Booie, come to my kraal and I will give you 500 sheep, 10 oxen, and a horse—I have nothing more." Booie held out his hand; suddenly, he was incredibly rich.

Schalk sold the big diamond—it weighed $8\frac{1}{2}$ carats—for \$56,000, a handsome fortune in 1870. In London, after cutting to $46\frac{1}{2}$ carats, it proved to be of the finest color and brilliance, and the Countess of Dudley gladly paid \$125,000 for it. In her tiara it became "The famous Dudley Diamond."

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started development in transistors for a much more peaceful purpose. Mother Bell wanted an amplifying and switching device whose service life and reliability is better than that of electronic tubes and mechanical relays.

The Future—Russia is putting a lot of energy into another development—not a product but a method: automation. Automation carries the promise of curing many of Russia's industrial ills, especially those caused by an overabundance of unskilled and poorly trained workers. It can be expected to improve product quality, lengthen the service lives of products and thus cut down Russia's mounting maintenance and replacement bill. It can free many technical men from the job of supervising manual operations. Most important, perhaps, from Russia's point of view, it can do all this without sacrificing speed.

Russian engineers are pushing automation in fields whose products are needed most—industrial vehicles, machine tools, textiles, and food products. In one Moscow factory, where lathes are made, 4-ft. castings for lathe-beds are being assembly line welded at the rate of one every 20 min. So it is possible for Russia to get better production with better production methods.

Management

Russians are like men anywhere; they are ambitious. They want to move upward along the line of control to better and better jobs. But there are two major differences between the promotion of a Russian management man and that of an executive in U. S. business:

Motives: Generally speaking, an American manager wants to move upward because it means more pay, more prestige—not because he is unhappy in his present job. A Russian manager on the plant level, however, is often quite unhappy. He is hounded by insistent demands for higher output, yet his plant may not be capable of producing any more than it is already. Stretched on this rack, he watches for an opportunity to get out just as soon as possible. The engineers below him, to whom he transmits the orders for more output, nourish similar plans to escape upward.

Results: When a U. S. executive moves up, or moves from one company to another, his skills are not lost to business. But when a Russian manager moves up, he is likely to move closer to the administrative machinery of government—away from the daily operations of industry, which he presumably knows well. Many managers and engineers have ensconced themselves in government administrative jobs; the result is that industrial management and engi-

neering ranks have been thinned out. The monster corporation is top-heavy; there are too few good men in the lower levels, too many up above.

Tools—Management in Soviet Russia is not yet the science it is in the U. S. In general, Russian managers have not yet learned to link the manufacturing factors of mass output, high quality, and low cost—the formula that U. S. industry has used successfully since the time of Henry Ford. Specifically, Russians haven't recognized the importance of the management tools that control the formula—statistical quality control, time and motion studies, operations research, parts standardization.

None of Russian industry's finished products shows any sign that Soviet managers are using these techniques. Some of the best Russian products have poorly fitted assemblies and give evidence of high-cost manual operations. U. S. experts who search through Soviet magazines rarely turn up articles that even allude to the management devices common in American industry.

Standardizing—The only management tool to which the Russians have paid any attention is standardization of product. Even in this case, they use it not as a fine tool but as a fairly blunt instrument. Often, they standardize the larger design of a product, but neglect the small parts and sub-assemblies, where Red production needs standardization and quality control most.

The standard small-sized tractor was designed originally for use in the U.S.S.R. But it has been passed along to some of the satellites—Hungary, Poland, and Rumania—for copying and mass assembly. This forced standardization among the Iron Curtain countries might have some disguised blessings for them. For example, Rumania uses Russian designs now to build steam turbines, products which aren't traditional in its industry. Czechoslovakia turns out machine tools as another innovation productwise. The mining industry is one where the problem of duplication has cropped up. More than 130 new kinds of automatic units have been made to push mechanization of coal mining, Russians claim. But J. D. A. Morrow, president of Joy Mfg. Co., and a specialist on Russia's coal industry, feels that the claim is pure propaganda. Chances are that the Red machinery makers turned out 130 new machines. And Morrow says "more than 100 are failures."

This may be a recognition of their industry's limitations. In an industry that uses freehand chalk drawings instead of accurate templates, that does much of its work by manual operation, that employs unskilled workers and asks only speed of them, it's probably foolhardy to base any plans on the hope that two parts will be identical.

The Dilemma—Automation may help solve the standardization problem, just as it may cure many other ills of Soviet industry. But it will also create a problem for Russian management—a problem possibly greater than any other that Russian industry has yet tackled. Automation, as it advances, will create an increasingly harsh conflict between the Soviet Union's industrial needs and its social system.

Automation means more than just a push-button factory, nearly devoid of workers. It means a self-sufficient plant. In U.S. industrial parlance, that means decentralization.

A robot factory turns goods out at a tremendous speed. To make full use of the factory, you have to make sure that everything connected with it moves at equal speed. Otherwise, there is hardly any sense in bothering with automation.

How do you make sure that the operations surrounding an automated factory move fast enough, stop fast enough, and start fast enough? Simply by giving the factory control of those other operations. A robot plant controls its own supply line, to a large extent processes its own materials, does its own planning. U.S. companies with far-flung assembly plants have found that this is the best, if not the only, way to make an automated plant work. Many of its assembly plants are almost separate companies.

Conflict—It's not hard to see how the requirements of a robot plant clash with Russia's political thinking. An automated factory needs its own management—a management authorized to make its own decisions. Russian plant managements today make few decisions for themselves; they take orders from headquarters on even minor matters. And Moscow's supervision of them is more than a mere hen-and-chick relationship. It is a political bond—one that a dictatorship can't afford to relinquish. It will not be nearly so easy for the Russian corporation to decentralize as it has been for U.S. corporations.

What will Russia do? There is no way of guessing. Possibly the Russian board of directors does not yet know itself.

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Prescription for Expansion

The President's Economic Report to Congress is not, on the surface at least, a dramatic and exciting document. There is no sense of anxiety over an impending crisis, such as we have known so often in the past. Our economy is in good shape, a fact more conducive to satisfaction than excitement. But this is far from a complacent document, for it presents an exciting philosophy that explains the Administration's legislative plans to encourage long-term economic growth.

It is easy to overlook the drama in this report, because we always seem to take the future for granted. Faith in our progress is an American characteristic, save perhaps in the 1930s when the notion of a mature economy had widespread, but brief, acceptance. Yet never before have we had a real and workable blueprint to encourage long-term expansion.

Sustaining Growth

In concentrating on growth, the President is supporting the Employment Act of 1946, which directs the government to promote a high level of activity consistent with our system of private enterprise. As interpreted by the present Administration, this means that it must not only be concerned with acting to alleviate business contractions, but should be engaged in fostering a sustained level of growth. It is proceeding on the reasonable premise that the "American people firmly believe in economic freedom," but expect government to use its powers to prevent instability.

This is a new conception of the government in our economic life. It will be alien to those who believe that the government's role should be a minimal one. It is also far removed, in theory and in practice, from the approach of previous Administrations, which sought an ever-increasing role for government.

Different Approach

The difference in approach is, in fact, spelled out in the report. The Administration believes that the dynamic aspect of our economy is best maintained by creating confidence in the ability of a free economy to generate more jobs and income. It seeks to accomplish this mainly by indirect influences rather than by direct controls. These include positive measures to encourage private initiative and to curb monopolistic tendencies of business or labor.

At the same time, the Administration is prepared to promote public projects—such as the construction of highways, hospitals, and schools—that will aid the expansion of the private economy. And it pledges itself to strengthening personal and family security measures, which it deems essential to continued progress.

These basic propositions have guided Administration policy to date. In the past two years, the Administration has relied heavily on indirect monetary and tax policies

to smooth the adjustment from the dangerous peak of a war-inflated boom to more normal levels of activity. There is no doubt that its actions—and its promptness in acting—inspired widespread confidence that proved instrumental in keeping the decline a mild one.

Potent Pills

The vigor of the recovery in the last few months, according to the report, is also due, in large part, to Administration action. Eisenhower and his economic advisers now believe that no further action aimed at stimulating—or overstimulating—business is needed in 1955. As the official diagnosticians of our economic health, they are prescribing what one observer has characterized as a mixture of basic vitamins to nurture future growth and well-being rather than a hypodermic that might momentarily stimulate activity but would inevitably incur an adverse reaction.

This does not mean that the Administration is complacent about the immediate future, or its ability to avoid instability. If trouble erupts, it will, of course, move promptly with counteracting measures. But convinced that expansion is already under way, its main efforts will be directed toward fostering sustained growth accompanied by a genuine measure of stability.

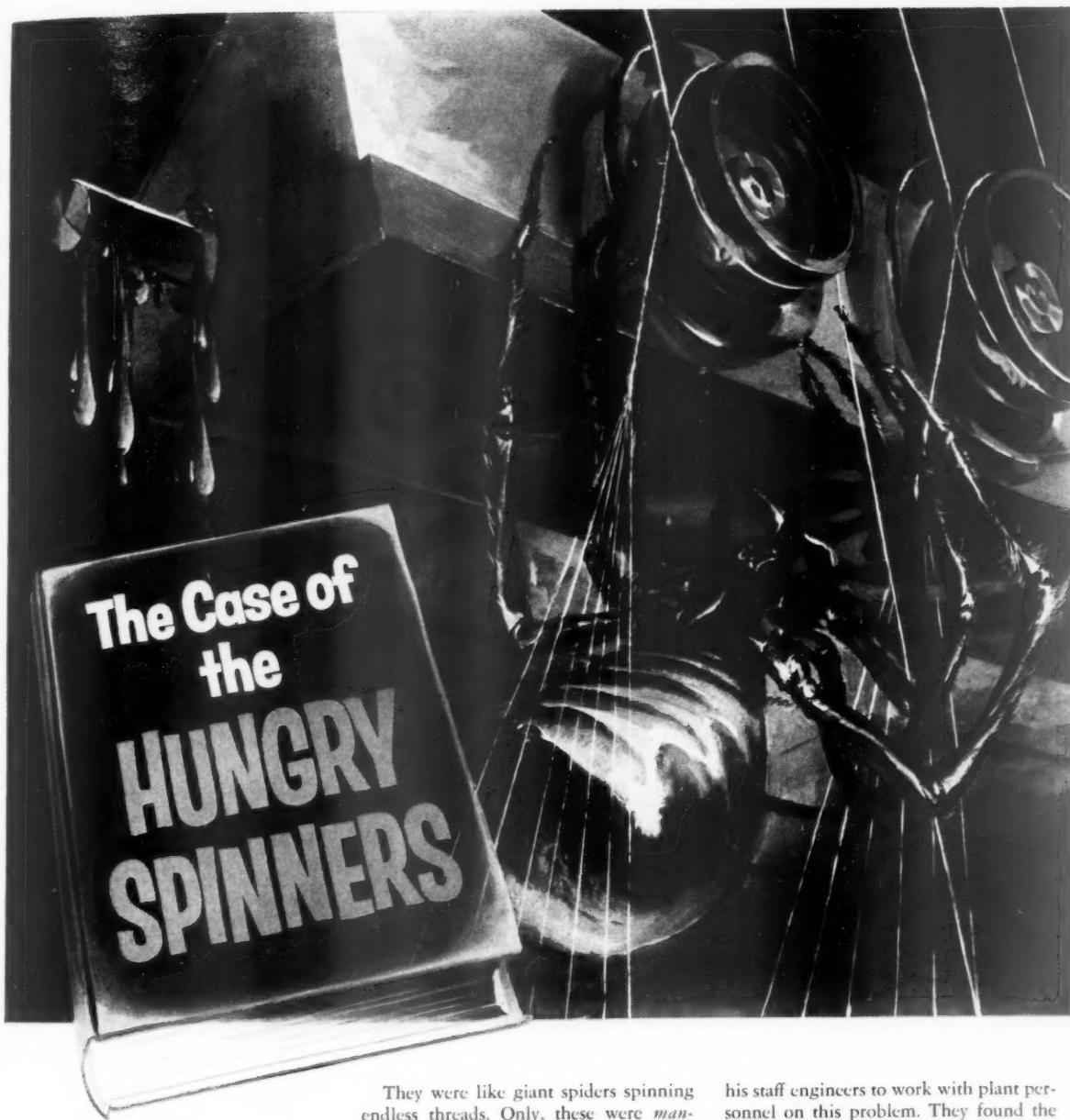
We believe that the Administration's recognition of its responsibility for promoting growth meets the need of the times. It deserves the support and understanding of the American people because it aims to facilitate the growth and preserve the strength of our free system. This is the right way to grow.

Understanding the Market

We are pleased to learn that Sen. William Fulbright has given assurances that his investigation of the stock market will be devoted to objective fact-finding (BW-Jan.22'55,p126). We hope and believe that there will also be no resort to the side-show atmosphere such as Ferdinand Pecora permitted in 1934.

There is no question that a serious study of the stock market can be useful. Certainly, there is nothing that the financial community has to fear from an objective inquiry. The recent boom in stock prices has not, after all, been caused by the kind of manipulations that were so frequent in the 1920s. If it had, it would be necessary to investigate the Securities & Exchange Commission, which has the power to regulate the market.

Thus, we think that an investigation into the market, provided it is not being carried out for political or cheap publicity purposes, is all to the good. It can provide the general public with a greater understanding of the market's workings. This is something the financial community should welcome and encourage.



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To remedy this, they cut a spiral groove in the shaft so as to force the oil back into the box. They also changed to a heavier grade of oil. As a result, oil loss was drastically cut, saving the company \$1,700 a month!

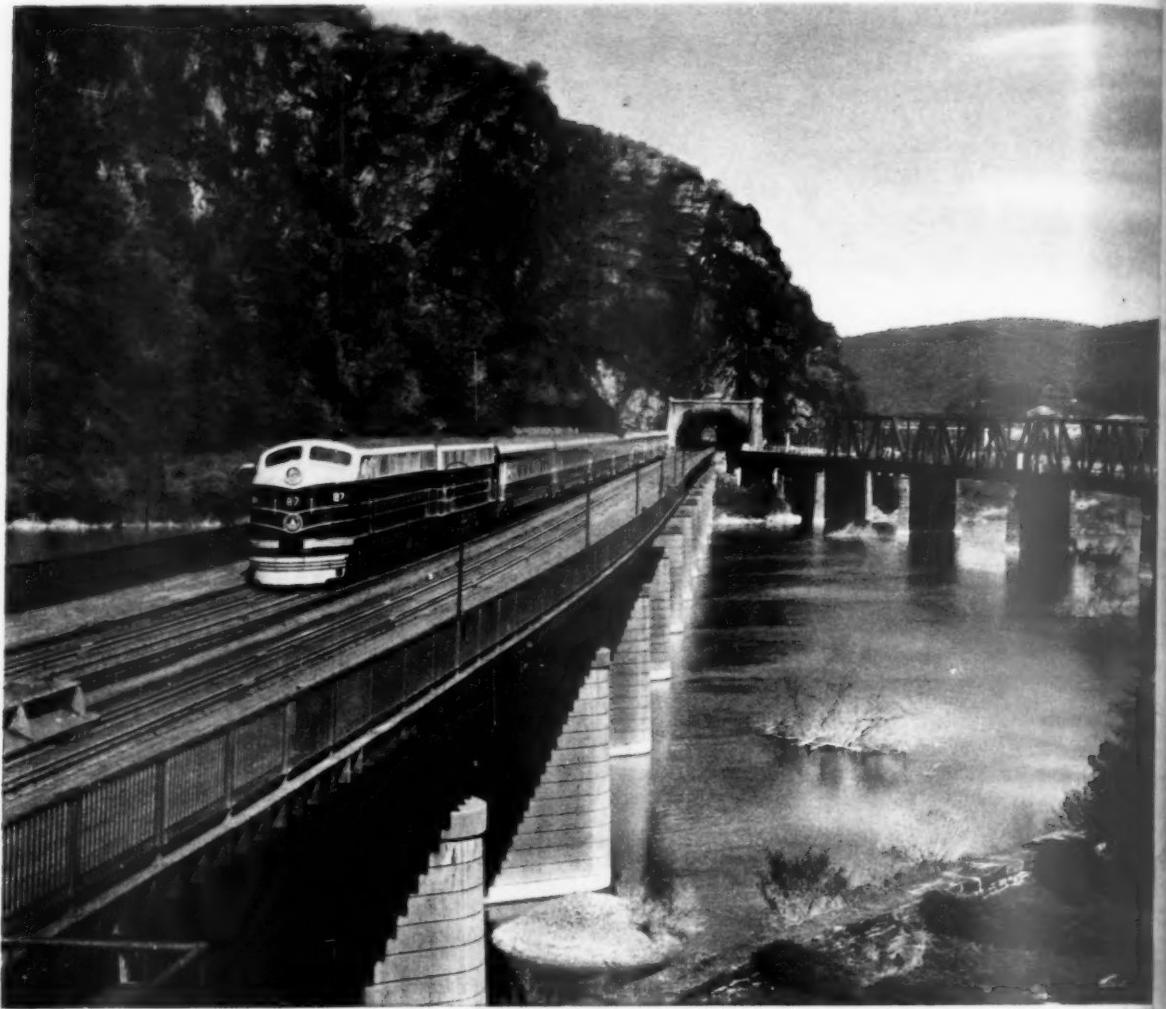
Engineering service like this comes with our program of Correct Lubrication. Why not call us and get such a program started in your plant?



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This all-Pullman *Capitol Limited* is a night school for freight trains

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What can a lowly freight learn from this luxury train?

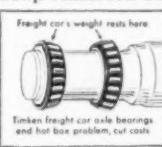
Just this: by 8:00 a.m. tomorrow sharp, just $15\frac{1}{2}$ hours but 767 miles from Washington, it will already be in Chicago.

The Timken[®] bearings on its axles help make this schedule possible. Now freights are profiting from the *Capitol's* example. They're turning from old-style friction bearings to Timken tapered roller bearings to eliminate the hot box problem, No. 1 cause of freight train delays.

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